



(1) Board Chairman J. Clark Coit whispers a new one into President Bill Grunow's ear. (2) S. L. Arneson tunes in a new Grunow radio by remote control. (3) H. L. Bonfig, vice president in charge of sales, in a brown study. (4) Bill with a mouthful, Bonfig hymning, and Jimmie Davin at the "mike." These candid camera snapshots were taken at a Grunow shindig in Chicago.

BY GEORGE F. TAUBENECK ---

Business as Usual

As is the case with many a celebrity and skyrocketer, rumors seem constantly flying around the head of BILL GRUNOW. In recent weeks we had heard so many of them that when we arrived in Chicago last week-end we would not have been altogether surprised to find the Grunow plant in ashes, the Grunow fortune in hock, the Grunow refrigerator junked, and Bill himself in a breadline.

First thing that struck our eyes in the Chicago papers that night, however, was a large advertisement signed by the Commonwealth Edison Co. announcing to the world in general and refrigerator prospects in particular that Grunow refrigerators were now on sale at all Commonwealth Edison shops. Which endorsement should have been a little disconcerting to the scandalmongers.

Next day we found the plant running at top speed, Advertising Manager DUANE WANAMAKER scurrying at breakneck haste between his office and that of the Hays MacFarland advertising agency, Sales manager (he's a vice president) H. C. BONFIG back at his desk after a dealer-meeting tour of the nation's largest metropolitan centers—so enthused by dealer reaction that he could do little but gasp: "It was wonderful—marvelous—unbelievable—" (if he had said "terrific" we'd have brained him), and Bill himself at

work out in the plant.

Business, we could see, was going on as per usual.

Man of the Year?

For some time we've been meaning to record the fact that the magazine *Tide*, which is a trade paper for advertising men, in its January issue nominated BILL GRUNOW as a possible candidate for the Man of the Year 1934. Along with those of HENRY FORD, WALTER CHRYSLER, and DAVID STERN, Bill's picture adorned the cover of that magazine.

Other nominees mentioned included LEE BRISTOL (Bristol-Meyers), CLARENCE FRANCIS (General Foods), and RUFUS DAWES (A Century of Progress).

Said *Tide* about Mr. Grunow:

"One of trio—flery William Carl Grunow—provided the year's most notable come-back.

"His Grunow Corp., founded in 1932, a year and a half after Grunow had been voted out of the Grigsby-Grunow Co. by an inimical board of directors, shipped its first refrigerator in February of last year.

"By March the since-famed 'It's time America knew what's inside a refrigerator' campaign was nettling the industry, booming sales.

"By June Grunow had absorbed the U. S. Radio & Television Co., set forth on a program of expansion under the high-sounding name of General Household Utilities Corp.

"At the Radio Show last fall there was a new line of Grunow sets. In the office are other appliances.

"But Grunow must thank the conditions of the year—refrigeration's best and biggest generally—for a good part of his refrigerator sales; the Grunow radio sets are too recent to have proved their importance; and Grunow's obvious intention of becoming a prime factor in the appliance field is still an intention.

"But Grunow must be put down in any listing of 1934 possibilities."

Garbled Carrene

Mr. Bonfig relates an anecdote about the bewilderment of WILLIAM DARDEN, Pacific Coast manager for General Household Utilities, when he appeared as guest of honor at the Grunow refrigerator preview and banquet held recently by Watson & Wilson in Los Angeles.

Immediately following Darden's spot on the program a speaker was introduced with the following build-up:

"When BILL GRUNOW was in Europe a couple of years ago he met a young chemical engineer who had just finished a post graduate course in one of the large German universities, and Bill was so impressed with his record that he brought him to this country.

"This young engineer has, for the past two years, been doing research work in the Grunow laboratories; and

most of his experiments have been confined to working with Carrene, the refrigerant used in the Grunow refrigerators.

"Mr. EDWARD I. BLAKE, whom I shall now introduce, arrived in Los Angeles this afternoon by airplane from the East and will now address you on the subject, 'How to present the exclusive features of Carrene to the woman who is interested in an electric refrigerator.'"

At this particular moment Darden was probably the most surprised man in the western hemisphere. Seated at the speakers table—purposely placed between two strangers so he could not possibly ask any questions—he could do nothing but wonder why in the world his factory would send a man out to a meeting of this kind without advising him.

His face literally shouted the query: "Who is this fellow Blake, and what's it all about, anyhow?"

And then the speaker started in to talk. His first two or three sentences gave the gag away to everyone in the audience who listens regularly to a radio, for the speaker was "BUD" BOIS, known to Pacific Coast radio fans as JOE TWIRP, and who can twist and mangle the English language in a fashion worthy of OLIVER WAKEFIELD or ROY ATWELL.

So for the next five minutes the Grunow dealers listened to one of the most outlandish stories of refrigeration ever spoken. Bois had been furnished with one of the Grunow booklets, "The Story of Carrene," and had warped and mangled it to his diabolic heart's content.

All of which reminds us of the Norge distributors' banquet in Detroit last winter, when Eastern Manager GLENN O'HARRA introduced another radio dialectician as the new Norge distributor in Stockholm, and how a Borg-Warner director spent much time in pointing out native American customs and folk-habits to the supposed visitor from Norseland.

Every Tuesday Night

Every Tuesday night at 9:30 p. m., Eastern Standard Time, over the Columbia network, General Household Utilities has been sponsoring EUGENE ORMANDY and the Minneapolis Symphony Orchestra in a series of half-hour concerts.

Eugene Ormandy, youngish conductor of the Minneapolis Symphony Orchestra, is a man who retired from the concert stage at the age of 11, a man who was a professor at 17, a man who studied in a motion picture theater to learn the art of conducting a symphony, and a man who has been creating successful radio programs for over 12 years.

At the age of eight, he was touring Europe as an infant prodigy... a violinist of unique ability, astounding audiences in the Courts... enthusing hearers in the leading theaters.

Nor did this spoil him in any way. He left the concert stage at the age

of 11 and entered the university at Budapest. At the age of 17, he was a full fledged professor, and at 21, he obtained his Ph. D.!

In 1921, he came to this country. He had been promised a \$30,000 concert tour. But all this promised return proved to be a myth. He had been brought to America under false pretenses by untrustworthy managers.

Soon, what little money he had was gone, and he found himself penniless, unable to speak the English language, wandering on the streets of New York.

Then, hearing that there was an Austrian conductor at the Capitol theater, he went there for a tryout. Upon hearing him, the conductor told him that he belonged, not in a movie house, but on the concert stage.

Ormandy's only reply was that he must eat, and so the leader placed him in the last stand of violins, probably one of the most unimportant of all places in an orchestra.

But this was only for a few days. Roxy heard him, during the orchestra's rehearsal, and, less than a week later, he became concertmaster.

From then on, his climb was rapid. A year later found him conductor of the Capitol Grand Orchestra, and assistant to Toscanini and Stokowski, conducting both the Philharmonic and Philadelphia orchestras.

In 1931, Ormandy came to Minneapolis as guest conductor. And so well was he received, that he has never left his post there, except for guest conducting engagements with other orchestras.

Ormandy gets a tremendous kick out of life. He enjoys driving over the country in his automobile. He likes to travel by plane. He plays ping pong for recreation, and is proud of his ability at the game. He's beaten every artist but Heifetz and claims he'll do that the next time they play!

He knows his music so thoroughly that he never uses a score when he conducts. In his mind's eye he can see every page of the music, and in his mind's ear he can hear every note. He has a thorough knowledge of acoustical values, to such an extent that he could set up his own broadcasting microphones as well as any engineer.

He is a prolific reader. He enjoys Eugene O'Neill. He is a radio fan... and gets a world of fun listening to EDDIE CANTOR and ED WYNN and the March of Time. He listens to every symphonic program on the air.

Short, jolly, full of pep, a thorough

musician, he is the HENRY BUSSE of symphonic music.

Like most successful conductors of symphony orchestras, Ormandy is a thoroughgoing showman. And perhaps that's why he is teaming up with BILL GRUNOW, for Bill is himself a showman, and likes show people.

(Last time we saw Grunow he had JACK HALEY on one side of him, and BENNY RUBIN on the other).

A Ted Cook Cook-Coo

The caustic TED COOK, whose clever and sometimes wildly funny column appears each day in Hearst papers, had the following jibes to make about canvassers the other day:

"Secretary Morgenthau's suggestion that door-to-door income-tax salesmen be employed to bring pressure on helpless citizens sounds a great deal like the last straw.

"Paying your income tax is annoying enough already. Besides, it'd probably result in even more falsification of returns.

"Most of us have trained ourselves to the point where we wouldn't call the fire department if a front-door salesman told us the house was burning down.

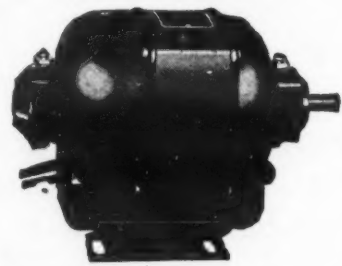
"The government'd probably raise more money and make itself much more popular if it just taxed the guys who're already working the house-to-house circuit."

Cramer-Krasselt Men, N.B.:

On the street level of the Maccabees building, where the Business News Publishing Co. still maintains offices (although most of the operation is now conducted in the new quarters at 5229 Cass), an enterprising Jewish boy by the name of JACK KRAMER conducts a news stand.

For some years we've been watching Jack augment his business—first by adding a candy department, then a lending library, a postal substation, greeting cards, neckties, and ping-pong slot machines. But his latest stunt takes the prize:

On his magazine rack the other day we found displayed copies of the *Norge Rollator News*, the house organ edited by Sales Promotion Manager JIM STERLING and put out by the Cramer-Krasselt advertising agency. Jack had found six copies of this magazine in the basement whither they had gone after being discarded by editors of *ELECTRIC REFRIGERATION NEWS*. To date he has actually sold two copies at 10 cents apiece!



The Resilient Flange Mounting of the Leland

is of particular interest to the refrigerator manufacturer. Because of it, Leland motors have met with favorable reception in this highly specialized field.

Leland designs so mounted operate without transmission of noise and vibration—important in compressor drives.

This special mounting also protects against shaft misalignment with respect to the base—another important point.

No radio interference—also due largely to the Leland resilient type of mounting.

Obtain a resiliently mounted Leland motor for comparison and test. You will be surprised.

Leland Motors
A PRECISION BUILT LINE
IN RATINGS UP TO 3 H.P.

The Leland Electric Company
Dayton, Ohio

Canadian Address
Toronto

Cable Address
"Lellect"

**YOU INVEST \$18.33
GROSS \$30.56
PROFIT \$12.23**

... with GILMER's fast-selling 35-R assortment of moulded rubber electric refrigeration belts. You are sure of fast turnover. It enables you to service 35 makes... including 140 models... of popular electric refrigeration units. All belts sleeved and MARKED for quick identification. 25 display hooks furnished... FREE... with each assortment. Write TODAY for catalog sheet containing complete details, including belts for all makes and models. The L. H. GILMER COMPANY, Tacony, Philadelphia, Penna.

Gilmer
Makers of the World's
Best-Known V-Belts

Specialists in Quality Belts Since 1903

ANSUL

the
**SULPHUR
DIOXIDE**
of
QUALITY

Ansul's careful manufacturing methods produce a sulphur dioxide that gives complete refrigeration satisfaction. The individual analysis found on every cylinder is assurance that quality has been maintained.



ANSUL CHEMICAL CO.
MARINETTE - WISCONSIN

NOW AVAILABLE... ANSUL METHYL CHLORIDE
Fast freezing, stable and non-corrosive. Every cylinder tested to assure low moisture and acid content. Write today for complete information.



REFRIGERATION NEWS

Registered U. S. Patent Office

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WESTINGHOUSE ADOPTS 4-YEAR SERVICE PLAN

NEWS ABOUT DEALERS

A Report of Activity In Three Central Illinois Cities

By Elston D. Herron

With a new selling season getting under way, and manufacturers all declaring that they will better their 1933 sales mark by a good margin, your reporter set out to talk with dealers, see what their outlook is, and how they are planning to sell in 1934.

We visited three towns within a 75-mile radius in central Illinois—a section of the country that has been pretty hard-hit by depressed industrial conditions, poor crops or low prices for farm products, and lack of activity in railroad shops and terminals.

Principal observations made during our tour of dealerships were these: As compared with other years, the refrigeration selling season is getting off to an early start in that section of the country. People—husbands and wives—are doing a lot of shopping now, coming into stores and asking for demonstrations, stating frankly that they plan to buy this year, but want to get a line on several makes first.

Dealers are planning to work harder on floor demonstrations than they have before, as store traffic has been heavier this spring than in seasons past. Economy (in current consumption and food-saving qualities) has been the retailers' most effective talking point lately, and they expect it to be a powerful sale-maker all during 1934.

With one exception, the dealers visited expect price to be much less of a factor than it was in '33, and they are finding prospects most interested in good-sized, deluxe models. They agree pretty generally that selling won't be as tough a job as it was last year, and they were unanimous in their belief that they will make new high sales records in 1934. Most of the dealers had nothing but good things to say about President Roosevelt, and were grateful to the NRA, both for its accomplishments in a material way and for its giving the public a more optimistic, willing-to-spend frame of mind.

Mattoon Dealers

First stop was in Mattoon, Ill., a town of 16,000 people supported chiefly by the Illinois Central and Big Four railway shops, the Brown Shoe Co.'s factory, the Kuehne Furniture Mfg. Co., and the farms in that area. For the past few years, the farmers and the railroad shops haven't helped the town much, but the two factories have operated on a fair schedule, and have been a life-saver to the city. Frigidaire dealer in Mattoon is O.

(Continued on Page 6, Column 1)

Salesmen Ask For Protection By NRA Code

New Jersey Group Seeks Minimum Wage For Canvassers

HACKENSACK, N. J.—To petition the NRA for protection of outside salesmen in the refrigeration industry by making some code requirement that they be paid a minimum wage, the National Commission Salesmen's Association has been organized here by commission salesmen of refrigeration outlets in the New Jersey and Manhattan trading area.

The association will expand to include salesmen's units in other parts of the country and make the organization national in scope, according to Edward Josay of Hackensack, temporary chairman of the group. R. A. Hey of 124 East Fort Lee road, Bagota, N. J., is temporary secretary. In a petition submitted March 14 to the National Recovery Administration, the association stated that in recent years " . . . outside salesmen have suffered losses only partially attributable to decreased buying, and largely due to the field being overcrowded with itinerant salesmen, for the most part recruited from the ranks of the unemployed."

It stated further that "sales organizations in the refrigeration industry . . . are planning this year to crowd the field with greater numbers of men"

(Concluded on Page 2, Column 4)

Kold-Hold Used in Ice Cream Cabinets

GREENVILLE, Mich.—Ice cream cabinets refrigerated with "Kold-Hold" units employing a eutectic solution are being marketed by the Consolidated Equipment Corp. of this city.

Included in the line will be standard ice cream cabinets, hardening and storage cabinets, and special counter dispensing units.

The refrigeration hold-over units employed in the cabinets are manufactured by the Kold-Hold Mfg. Co., of Lansing, Mich., and are of the

(Concluded on Page 13, Column 1)

1934 Directory Announcement

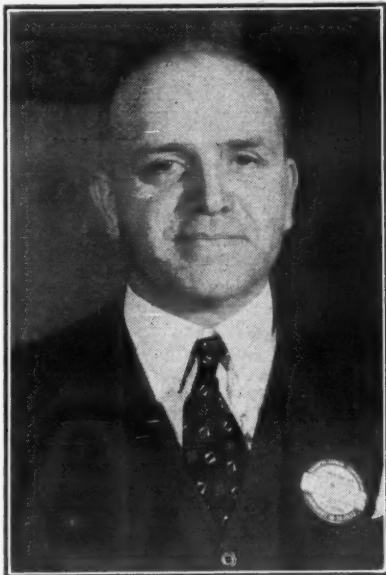
"When will I get my copy of the 1934 REFRIGERATION DIRECTORY?" subscribers are asking. Well, sirs, it won't be long now. You may have to wait another 10 days but the wait will be worthwhile.

Over 600 pages of facts and figures, names and addresses, specifications and charts! Everything you can think of that an industry yearbook should contain. You will find it all in the big new volume.

Those who have paid orders on file will get their copies first. We are

Louis Ruthenburg Elected President of Servel, Inc., at Board Meeting

President



LOUIS RUTHENBURG

Servel Adds Line of Large Capacity Units

EVANSVILLE, Ind.—Servel, Inc. has extended its line of commercial condensing units with 5-hp., 7½-hp. and 10-hp. compressors for air conditioning or the larger types of standard commercial refrigeration applications.

The new units are characterized by a rather novel arrangement of component parts. The compressor is mounted on an angle iron base, with the motor mounted above on a supporting frame, the belt drive being on a vertical plane.

The vertical welded steel shell liquid receiver is mounted adjacent to the compressor, and the concentric tube counterflow condenser is spiraled around the receiver. Receivers in the new models have a capacity of 55 lbs. of refrigerant.

Either methyl chloride or Freon can be used with the new Servel units.

(Concluded on Page 10, Column 5)

NEW YORK CITY—Louis Ruthenburg, consultant to the Refrigeration Division of National Electrical Manufacturers Association, and formerly president of Copeland Products, Inc., was elected to the presidency of Servel, Inc., at a meeting of the board here on March 23, according to Axel Wenner-Gren, chairman.

H. H. Springfield, retiring president, is retained in an advisory capacity on a basis which will leave him free to devote time to other interests, says Mr. Wenner-Gren.

In 1929, Mr. Ruthenburg resigned as vice president of the General Motors Truck Co. to become president of Copeland in Mt. Clemens, Mich. A year later he was elected to the chairmanship of the Refrigeration Division of Nema, and in September of 1932, resigned the Copeland presidency. A short time later, he became Nema refrigeration division consultant.

As consultant, he has done much during the past year to coordinate the refrigeration industry's operations with provisions of the National Industrial Recovery Act.

He matriculated at Purdue university, Lafayette, Ind., in 1905, and spent two years in its engineering school. During the next two years, he worked with a company manufacturing parts for steam automobiles, then for another year helped in development of electric furnace processes in London, England.

Returning to America, he established himself in Louisville as a consulting engineer, and shortly thereafter be-

(Concluded on Page 2, Column 4)

Nema Urges Defeat Of Wagner Bill

NEW YORK CITY, March 28.—The Wagner Bill, establishing a National Labor Board and regulating conditions of collective bargaining in industry, was attacked today by the Board of Governors of the National Electrical Manufacturers Association as "the most potent weapon yet devised to provoke discord and jeopardize the future of the industry."

In a bulletin which set forth in detail the association's reasons for believing that the bill would promote the very industrial discord it is intended to avert, the organization's members are urged by A. W. Berresford, managing director, to communicate their opposition both to the Congressional committees considering the Wagner Bill and its more drastic House companion, the Connery Bill.

(Concluded on Page 2, Column 1)

Nema to Discuss Code At Meeting March 29

NEW YORK CITY—Members of the National Electrical Manufacturers Association (Nema) will meet March 29 at the Mayflower hotel in Washington, D. C. NRA officials will be present at the meeting, and code matters are scheduled to come up for discussion.

Westinghouse to Replace Units For Five Years

Purchaser to Pay \$5 for 4-Years Service After 1 Year Warranty

MANSFIELD, Ohio, March 27.—Westinghouse Electric & Mfg. Co. this year will provide a four-year unit replacement contract in addition to the one-year warranty on its complete line of hermetically sealed refrigerators, it was announced today by R. C. Cosgrove, manager of household refrigeration sales.

The new replacement contract costs the purchaser \$5 and assures him of cost-free service from the hermetically sealed mechanism during the first five years of its use.

The user's protection under this plan is confined to the hermetically sealed mechanism and does not provide for replacement beyond the first year of the control, cooling fan, cabinet, or other unsealed parts of the mechanism.

Mr. Cosgrove explained that during the four years succeeding the one-year warranty, if a unit is replaced, due to its being defective, that the dealer will be reimbursed by the factory in the amount of \$5 for each replacement to compensate him for his time and other expense.

Hadley Syndicate to Sell Liberty Line

PROVIDENCE, R. I.—The Liberty line of household electric refrigerators will be marketed by the Hadley syndicate of retail stores, with 26 outlets in all sections of the country, it has been announced by L. Sheeran, superintendent of the Liberty Refrigeration Corp.

Plaut Cadden of Norwich, Conn., and Herrup's of Hartford, department

(Concluded on Page 10, Column 4)

4 Distributors Named for Wurlitzer-Mohawk

NORTH TONAWANDA, N. Y.—Four new distributors have been appointed by the Rudolph Wurlitzer Mfg. Co. here to handle the company's line of refrigerators.

They are: Malone & Moles, 805 Pierce St., Sioux City, Ia.; E. Garnich & Sons, Ashland, Wis.; Hub Cycle & Radio Co., 19 Portland St., Boston; and F. C. Mathews & Co., 18 E. Fulton St., Grand Rapids, Mich.

Refrigeration Division Of Nema Meets April 3

DETROIT—A meeting of the Refrigeration Division of National Electrical Manufacturers Association has been scheduled for Tuesday, April 3, in the Book-Cadillac hotel here.

G-E's Vice President Ted Quinn Tells 1,000 Dealers How To Sell Refrigerators



T. K. Quinn, vice president of the General Electric Co., has the reputation of being one of the most forceful orators in the entire electrical industry. The candid camera caught Mr. Quinn in these characteristic forensic poses and gestures while he addressed Chicago G-E dealers in the Palmer House grand ballroom.

Electrical Manufacturers Oppose Wagner Bill; Cite Dangerous Effects

(Concluded from Page 1, Column 4)

The fact that the Nema Board of Governors is asking members to take action indicates the importance they attach to the blocking of this measure.

Pointing out that ever since the Electrical Code was approved last August, that industry has maintained general peace in its labor relations by rigid and fair compliance with the code's labor provisions, the governing board warns that the whole structure so carefully built up is threatened by the Wagner Bill.

The measure is described as dangerous on three grounds:

First, because "seemingly it is founded upon the exploded theory that the interests of employers and employees are antagonistic, not mutual."

Second, because it specifically empowers employees to indulge unrestrained in every practice which is specifically forbidden to employers.

Third, because it gives to an inevitably political National Labor Board powers which it has not been considered safe to entrust to any court in the land.

"No labor practice," the governing board points out, "is 'unfair' when operated by one who asserts that he is a representative of employees."

"He may attempt 'by interference, influence, restraint, favor, coercion, or lockout (strike) or by any other means to impair the right of employees to organize and join labor organizations, to engage in concerted activities, either in labor organizations or otherwise, for the purpose of organizing and bargaining collectively through representatives of their own choosing or for other purposes of mutual aid and protection."

"Under the Wagner Bill these things

are 'unfair labor practices' only when they are done by an employer. The National Labor Board is without authority to issue any order of any character against any labor organization or its agents with respect to the defined 'unfair labor practices.'"

Employers, it is pointed out, are forbidden by the bill to cooperate in preserving industrial peace by making good to employees time used during the working day for consideration and solution of labor problems.

A labor organization which comprises a bare majority of employees, the bill provides, may prevent any man or woman from obtaining work unless he is willing to join the organization.

Political considerations are inevitable, the Board of Governors believes, in a National Labor Board which makes available three \$10,000 jobs good for five years and four \$25 a day positions good for one year, all eligible to reappointment, subject to not a single protective requirement as to the qualification of members.

"To this board, so obviously subject to purely political influence, are entrusted powers which, in the light of human fallibility and the enormous interests involved, should not be entrusted to any body of men, however adequately chosen and however exalted their standards," the Nema bulletin declares.

On 24 hours' notice the Labor Board, meeting within or without the boundaries of the United States, may require the presence regardless of distance, convenience, or any other consideration, of any employer whom it suspects of any practice which the board believes may even tend to burden or affect the free flow of commerce. Any member may act as

D'Olive Gets Another Trophy



Charles D'Olive, Stewart-Warner refrigeration manager and an inveterate pipe smoker, was presented with this selection by Harry Lever of Atlanta.

sole judge, though he himself might have initiated the complaint upon which he alone will pass judgment.

Employers may be haled, the Nema Board of Governors warns, upon a vague general complaint which may be amended as the hearing proceeds; and this hearing need be governed by none of the rules of evidence prevailing in courts of law or equity. However arbitrary or frivolous the Labor Board's conduct or that of its examiners, the courts are specifically forbidden to intervene for the protection of the harassed respondent.

"To convey these extraordinary

powers to a board constituted as provided in the bill means inevitable political domination of the employer-employee relation, and ultimate destruction of the rights of both.

"The bill, far from giving promise of accomplishing its stated purpose of equalizing the bargaining power and encouraging amicable settlement of disputes between employer and employees, would seem to have been (if the good intent and constructive purpose of its author were not so well recognized) calculated to aggravate and exaggerate the very conditions which it proposes to cure.

"National Electrical Manufacturers Association by the conduct of its affairs has evidenced its intent to abide by the provisions of the Code for the Electrical Manufacturing Industry and to administer its problems with understanding and even-handed justice."

Commission Salesmen Seek Minimum Salary

(Concluded from Page 1, Column 2)

than ever, to a point where the average man will be unable to eke out a living income."

Members of the petitioning group claimed that if the NRA would make a minimum wage compulsory, three advantages would accrue to both the salesmen and their employers:

1. "Restore buying power to the regular outside commission salesmen. 2. Increase total manufacturers' sales through better controlled and better organized sales organizations. 3. 'Correct evil practices,' such as dividing up a regular salesman's territory during busy seasons, compulsory payment of a license fee by salesmen in some towns accustomed to a superfluity of salesmen, and inclination by many to look upon salesmen as a 'public nuisance.'"

Specific proposals of the petition were that outside commission salesmen be recognized as entitled to a minimum wage, that there be no charge-back on commissions on a repossessed unit where purchasers' payments have equalled or exceeded commissions paid, that there be no deductions from salesmen's commissions for accessories offered by manufacturers or sales organizations.

Also, that salesmen be charged not more than one-half of their commission where allowances are made on a used refrigerator as a "company trade-in," and that protection be given against a salesman's commission or any part of it being paid to persons not regularly employed as salesmen by an employing company.

Ruthenburg Elected President of Servel

(Concluded from Page 1, Column 4) came superintendent of the electric vehicle department of the Kentucky Wagon Works, which position he held until 1912, when he joined the Dayton Engineering Laboratories Co. (Delco) in a managerial capacity.

In 1922, Mr. Ruthenburg went to the General Motors Research Laboratory to help put some new G-M products in shape for production. After a period as general manager of the Yellow Sleeve Valve Engine Works at East Moline, Ill., where he went in 1923, he returned to General Motors Corp. when the latter absorbed the Hertz manufacturing interests.

After his election to the vice presidency and assistant general manager-ship of the General Motors Truck Corp., he was assigned to the building of that company's \$8,000,000 plant at Pontiac. He designed it and supervised its construction, and then resigned to go with Copeland.

Proposed Law Would Permit Sales Tax on Interstate Commerce

WASHINGTON, D. C.—A bill which permits states to apply taxes on sales of tangible personal property that moves in interstate commerce, in the same manner as upon similar transactions wholly within such states, was passed by the United States Senate March 15, and is now in the hands of the Committee on Interstate and Foreign Commerce of the House of Representatives. It is claimed that this bill would have the effect of modifying the Constitution of the United States. At the present time, there are twenty-six states that have sales tax laws. The bill (No. S-2897) is as follows:

"A Bill to regulate interstate commerce by granting the consent of Congress to taxation by the several States of certain interstate sales.

"Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That all taxes or excises levied by any State upon sales of tangible personal property, or measured by sales of tangible personal property, may be levied upon, or measured by sales of like property in interstate commerce, by the State into which the property is moved for use or consumption therein, in the same manner, and to the same extent, that said taxes or excises are levied upon or measured by sales of like property not in interstate commerce and no such property shall be exempt from such taxation by reason of being introduced into any State or Territory in original packages, or containers, or otherwise; *Provided*, That no State shall discriminate against sales of tangible personal property in interstate commerce, nor shall any State discriminate against the sale of products of any other State; *Provided further*, That no State shall levy any tax or excise upon, or measured by, the sales in interstate commerce of tangible personal property transported for the purpose of resale by the consignee; *Provided further*, That no political subdivision of any State shall levy a tax or excise upon, or measured by, sales of tangible personal property in interstate commerce. For the purposes of this act a sale of tangible personal property transported, or to be transported, in interstate commerce shall be considered as made within the State into which such property is to be transported for use or consumption therein, whenever such sale is made, solicited, or negotiated in whole or in part within that State.

"Receivers, liquidators, referees, and other officers of any court of the United States, are required to pay all taxes and licenses levied by any State or subdivision thereof the same as corporations, partnerships, concerns, persons, or associations of persons are required to pay the same."

60 Dealers at Detroit Wesco Convention

DETROIT — Sixty Westinghouse dealers from Detroit and vicinity met March 22, at Hotel Webster Hall, as guests of the Westinghouse Electric Supply Co., in this city, to hear spring selling programs explained by officials of the distributorship and headquarters executives. The affair was the second of a series of 12 dealer meetings being held in this part of the country.

By sound film, messages were brought to the dealers from Messrs. Allen, Cosgrove, and Mahan at the Westinghouse factory in Mansfield. Another film showed installations of Westinghouse refrigerators in typical homes throughout the country, and gave testimonials of their owners.

J. W. Johnston, central district refrigeration supervisor, described construction features of the Westinghouse unit and cabinet, and J. E. Hugo, central district sales promotion manager, outlined the company's spring sales promotion plans.

P. E. Rinehart, refrigeration supervisor from Pittsburgh, spoke on store identification, his talk being followed by another film showing how a Westinghouse dealer in Kokomo, Ind., conducts his operation and has prepared his store and selling organization for the 1934 season.

The Detroit meeting was in direct charge of J. H. Campbell, Wesco district manager, and W. H. Howlett, sales promotion manager of the distributing organization in Detroit.

Larkin Co. to Distribute Automatic Washers

NEWTON, Ia.—M. D. Larkin Co. of 115 East Third St., Dayton, O., has just been appointed distributor for Automatic washers and ironers, according to Roscoe N. Bratt, sales manager of the Automatic Washer Co. here.

THERE IS A MAN AT YOUR TELEPHONE

ready to show you a way of handling your time payment sales to get results. He is the C.I.T. Representative in your territory.

Our credit checking and our collection services attain an unusual degree of efficiency for the reason that they are carried through on the ground by our own well trained men in our Local Offices. Wherever you are there is a C.I.T. Office near you. It gives cash for your paper and relieves you of all credit sales burden. Rates for this complete C.I.T. Refrigerator Financing Service are uniformly low. It is the choice of a large percentage of successful dealers everywhere.

C.I.T. Plans cover approved types of mechanical refrigerators and water coolers; also electric ranges and air-conditioning equipment. Phone today our nearest office for a C.I.T. field man to call and discuss how C.I.T. Service might aid you.

C.I.T. CORPORATION

NEW YORK — CHICAGO — SAN FRANCISCO

Completely Functioning Local Finance Offices in the Principal Cities

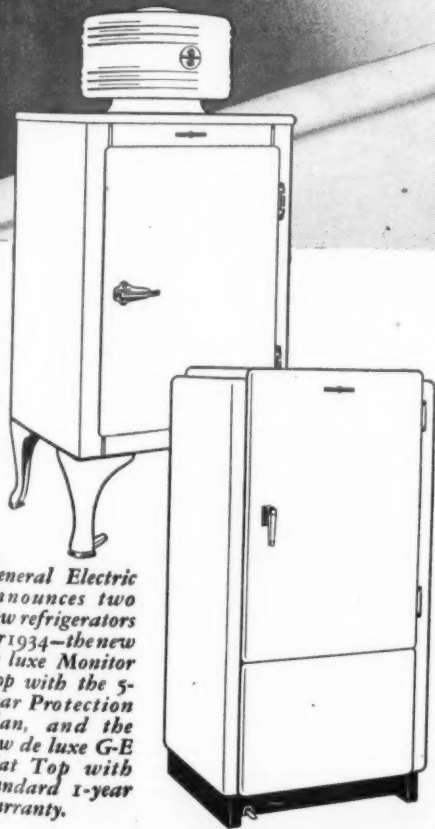
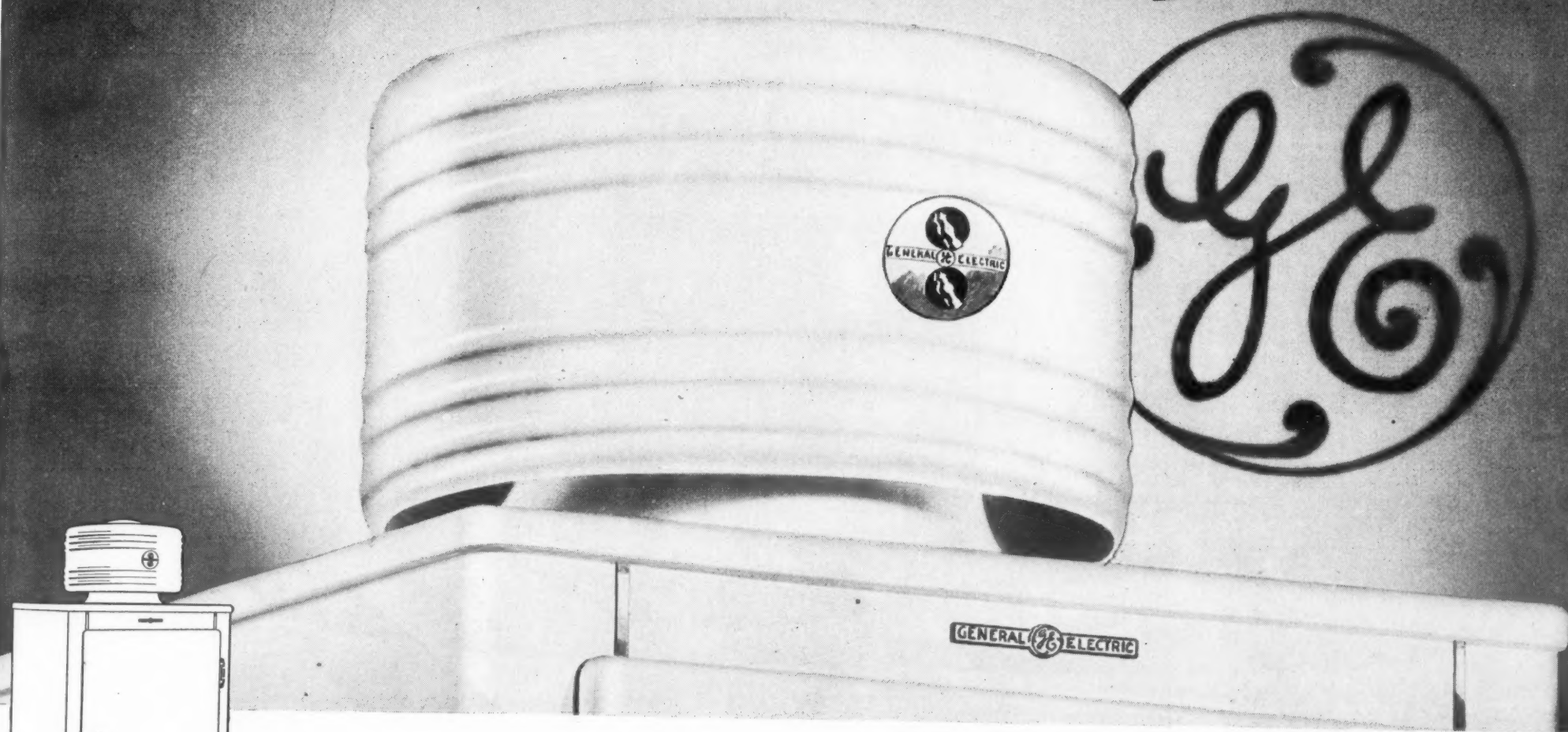
A Unit of COMMERCIAL INVESTMENT TRUST CORPORATION — CAPITAL AND SURPLUS OVER \$70,000,000

THESE C. I. T. LOCAL OFFICES WILL WELCOME YOUR INQUIRY

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Portland, Me. - Portland, Ore. - Portsmouth - Poughkeepsie - Providence
Raleigh - Reading - Reno - Richmond - Roanoke - Rochester - Rome,
Ga. - Sacramento - St. George - St. Louis - Salt Lake City - San Antonio
San Diego - San Francisco - San Jose - Scranton - Seattle - Spokane
Springfield - Stockton - Syracuse - Tallahassee - Tampa - Toledo
Tucson - Tulsa - Utica - Washington - Watertown - Wheeling - White
Plains - Wichita - Wilkes-Barre - Wilmington - Wilson - Youngstown.

5 YEARS

PROTECTION
on the Monitor Top mechanism



THE first electric refrigerator to carry a 2-Year Guarantee—first with a 3-Year Guarantee—and first to give a 4-Year Service Plan—now offers 5 YEARS' PROTECTION on its famous sealed-in-steel Monitor Top mechanism for only \$1 a year! A complete 1-Year Standard Warranty free, and four years' additional protection against failure of the sealed-in-steel mechanism for only \$5.00.

Again General Electric proves its faith in the unfailing performance of the Monitor Top by offering even greater protection to G-E refrigerator buyers than ever before. Public preference for the Monitor Top has been built on its unparalleled service record, backed by the

broadest guarantee in refrigeration. The new 5-YEAR PROTECTION PLAN now demonstrates to buyers of electric refrigerators that it is General Electric's purpose to build *lifetime* performance into every Monitor Top mechanism.

It means that General Electric refrigerators will have even greater public preference than ever before. It means more sales, more profit, more good-will for General Electric dealers. If you are not already a General Electric refrigerator retailer, write or wire for details of the G-E Franchise. General Electric Company, Electric Refrigeration Department, Section DF 33, Nela Park, Cleveland, Ohio.

GENERAL  ELECTRIC
ALL-STEEL REFRIGERATORS

General Electric announces two new refrigerators for 1934—the new de luxe Monitor Top with the 5-Year Protection Plan, and the new de luxe G-E Flat Top with standard 1-year warranty.

BY GEORGE F. TAUBENECK ---

Tribute to the 1933 Fair

A. J. MULLOWNEY of the Brunswick-Balke-Collender Co. reports that during the five months and 26 days that the Fair was open, more than 12,000,000 people visited the General Exhibits building, and according to his records at least 4,000,000 people passed through the Brunswick-Balke-Collender exhibit. Their men in charge talked to more than 50,000 persons during that time.

During the Fair B-B-C men passed out 150,000 "Brunswick Highlights" (an attractive folder outlining the history of their company and illustrating the various products they manufacture); 20,000 pamphlets advertising their toilet seats; 18,000 "Junior Playmate Table" folders; 25,000 blotters with the address of their exhibit imprinted thereon; 10,000 "Bowling" pamphlets; 3,000 "Billiard and Bowling News"; 50,000 packages of matches; and other advertising material, including 7,000 postcards which visitors mailed home and to their friends all over the world.

A check-up of the floors of the exhibit and the streets of the Fair proved that the "Brunswick Highlights" had not been thrown away, indicating that it had been carried into the homes by those who had taken it. The names and addresses of more than 5,000 customers were obtained, of which a good number developed into actual sales, Mr. Mallowney states.

The 1934 Fair

A Century of Progress Exposition will re-open its gates to the world June 1, 1934. It promises to be in every way a better and more spectacular Exposition than its 1933 predecessor, which attracted nearly 22,500,000 visitors.

Improvements resulting from the experience of a previous year's operation should make it a more effective and smoothly functioning spectacle. Novelties and innovations should lend freshness and new fascination.

The Exposition's physical plant, including all its unique buildings on Chicago's lake front, is unimpaired.

There will be, however, important changes in the physical layout of parts of the Exposition grounds. New and expressive colors will dress up the architecturally original Fair buildings. Illumination effects will be enhanced, presenting new panoramas of light and color. The lagoons are to be re-lagooned. Entrances to the grounds will be dramatized and re-decorated. There will be better transportation for the visitors, more comforts and conveniences, and new eating places on the grounds.

An outstanding addition to the 1934 World's Fair will be series of foreign villages. So popular was the Belgian Village at the Fair last summer that the head men have decided to go into the transplanted village business in earnest. The same faithfulness to historic detail and artistic effect will characterize these villages.

These new attractions will include, a Swiss Village (La Suisse Pit-

Note to A.S.R.E. Members

During the A.S.R.E. convention in New York City last December Jack Schaefer and the writer were taking floodlight pictures in a New Yorker hotel room. In posing one of the pictures an address book belonging to the writer was used, and later forgotten. Since that time reports have been reaching us that said address book has been turning up in many and various places. Will the man who now has it kindly mail it back to us? We'll be glad to let it resume circulation after we have copied some information—which we happen to need badly just now—out of it.

toresque); an English Village (Old England); a German mountain village (Black Forest Village); an old Spanish Village; and a Tunisian Village of Northern Africa, (Land of the Bedouins.)

The Swiss Village is to occupy about two acres of ground south of the Golden Pavilion of Jehol and west of the Hall of Science, near the 18th St. entrance to the grounds. The other villages are to be located on extensive sites that were formerly occupied by the Midway.

The Swiss village will feature a reproduction of the Alps, more than 200 feet high, the peaks crowned with synthetic snow. The village is to nestle at the foot of the mountains and to be authentic reproduction of the older parts of the City of Berne, capital of Switzerland.

In "Old England," which will occupy about two and a half acres along the west side of what was formerly the Midway, south of 23rd St., there will be reproductions of buildings made famous in the history of England from the sixteenth century on.

Among the reproductions you may see are the Old Cheshire Cheese Inn in London; Sulgrave Manor, ancestral home of the Washington family; parts of the Tower of London; the cottage of Ann Hathaway, wife of William Shakespeare at Stratford-on-Avon; Haddon Hall; and Stokes Poges Church, where Thomas Gray wrote his "Elegy in a Country Churchyard."

The Black Forest Village of Germany, or the "Schwarzwald Dorf," will rise directly across from Old Fort Dearborn at 26th St., and will cover more than an acre of ground. An actual Teutonic community with its life, its homes and business activities will be reproduced.

There will be synthetic snow on the housetops, big icicles hanging from the eaves, snow-covered hills in the background, and it is planned to have a frozen mill pond in the center where ice skating will be featured all summer long.

Air conditioning will play an important part in emphasizing the illusion of winter, by maintaining the

buildings at low temperature even on the warmest summer days.

The Spanish Village promises to be one of the largest and most elaborate reproductions of a foreign village ever constructed on American soil. It will be an exact duplicate of the Spanish Village which formed an outstanding attraction at the Barcelona Exposition in 1929.

The village will occupy an area of more than three acres at the north end of what was the old Midway. It will rise on the site formerly occupied by the Spanish Pavilion and the Oriental Village.

Historic castles and other buildings from the six most famous provinces of Spain will be features of the exhibit, dating back from the sixteenth, seventeenth and eighteenth centuries.

One of the most interesting reproductions will be of the famous monastery at Poblet, Spain, which houses the famous Virgin of Pilar, a shrine visited by thousands of pilgrims annually.

"Land of the Bedouins," or the Tunisian Village, will occupy a site between the Spanish Village and the Pantheon de la Guerre. Arab sheiks, fierce Bedouin tribesmen and North African craftsmen demonstrating their arts and handicraft will people this village.

Typical North African architecture will be reproduced. There will be street bazaars, a mosque, minaretted towers, and an Arab theater where there will be free performances.

Arab merchants in their picturesque garb will display brass and leather ware, jewelry, rich oriental rugs, pottery and other examples of desert handicraft. There will be typical Tunisian restaurants serving the delicacies and beverages popular in that country.

These villages will lend much to the life and charm of the 1934 World's Fair. Bright cafes will be located in all of them, with music, folk dancing and gaiety to add enchantment.

Consessioned entertainment features which proved especially popular in 1933 are being retained, and in many cases further embellished. Among these are: The Belgian Village; the Sky Ride; Wings of A Century; the Enchanted Island; the reproduction of old Fort Dearborn; and Golden Pavilion of Jehol.

One of the most important physi-

At Press Time



Midnight at the Electric Refrigeration News office as the paper is going to press. Staff Writer Elston D. Herron (right) passes out completely, but Assistant Editor Phil Redeker is still going strong as he momentarily shifts attention from a page of proof to his black-bespectacled pal. These snapshots were taken in quick succession.

cal changes in the Exposition will be the moving of the Midway over to Northerly Island. The entrance to this entirely new Midway will be between the Planetarium and the Agricultural and Foods Building. Thrill rides, spectacles, shows, and entertainment of many varieties will be offered as they were last year.

The essential spirit of last year's A Century of Progress will be preserved in the 1934 Fair. The theme and purpose will be the same. Exhibits will tell the story of industry's indebtedness to science and the methods by which industries provide mankind with comforts and conveniences that were undreamed of a hundred years ago.

All the extraordinary attractions of novelty and industry that rewarded patient study last year will be found again at the 1934 Fair. All who derived a stimulation from that experience will find the same exhibits that aroused their enthusiasm last year, modified only by the advances of science within the period.

"Show it in action" is again the keynote of the exhibit plan. As far as possible, industrial processes will be shown in actual operation.

Important note: All comfort stations and toilet facilities throughout the Exposition grounds will be free to the visiting public in 1934. During the 1933 Exposition a certain percentage of the toilet accommodations were operated by a concessionaire. The Exposition management has acquired control of all these conveniences, and is making certain that they will be free to visitors thus eliminating the major target for jibes at the 1933 Fair.

Five acres of the 11-acre Ford tract

at the Century of Progress Exposition are to be given over to Henry Ford park, which will be just across Leif Eriksen Drive from the 1,100-foot building, with an 1,100-foot frontage on Lake Michigan.

A large band stand, with a shell-shaped sounding board and an outdoor auditorium with a seating capacity of 2,500, is on the plans as the outstanding feature of the lakeside pleasure ground.

A two-winged restaurant, one pavilion on the lakeside and the other reaching toward the drive, is in contemplation. According to this plan, the band stand will be erected in the angle at the southeast end.

Exposition visitors may bring their own luncheons to Henry Ford park and eat them picnic fashion anywhere in the tract except within the restaurants.

And while so doing they will have band concerts, for band music is to be an important part of the hospital-ity program.

A greater part of the length of the Ford exposition building is to be spanned by an open-air balcony facing the park. Here, also, will be free seats for the weary.

The Maya Temple is to be "pepped up" for the 1934 show. New and unusual exhibits depicting the manner of living of the ancient Mayas are being developed for display by Dr. Frans Blom, head of the department of Middle American Research at Tulane university, Louisiana.

The molds from which the carvings of the Maya Temple were produced were made at Tulane. One of the groups will be a reproduction of an explorer's camp in the tropical jungles of Yucatan. It will be shown with supplies and scientific equipment used by explorers.

The Southern Cypress Manufacturers' Association, which displayed the cypress log cabin in the home section last year is so well pleased that it will have an enlarged exhibit this year.

The cabin is to be redecorated inside and outside, and the association has made arrangements to take over the space used by the dahlia garden last year on which to erect a cypress building to be used as a woodworking shop, in which the "wood eternal" will be worked up into a number of shapes for different purposes.



Interested members of the R. Cooper Jr. organization listen to Ted Quinn.



Scenes from a G-E road show playlet, delineating The Convincing of Father. (1) Father's evening paper digestion is interrupted by Mother's reminder that "this is the spring we were going to get an electric refrigerator." (2) G-E salesman calls at the opportune moment, and talks to Mother while Father sulks. (3) Father gets interested. (4) What Father saw at the G-E showroom.



Dick Cooper's own organization supplied the histrionic talent needed to put on the skits and playlets at the seventh annual dealer meeting and convention of the Chicago G-E distributor.

LEAD IN YOUR TOWN!

The collage features several overlapping documents and a central photograph. The documents include:

- MARIONETTE SHOW**
- METERATOR PLAN**
- KELVINATOR WEEK**
- ADVERTISING**
- HOME DEMONSTRATION**
- EMPLOYEE SALES PLAN**
- IDENTIFICATION AND DISPLAY**
- MOVIE THEATER PLAN**
- EMPLOYEE SALES PLAN** (with text: "The local leader in refrigeration sales... well arranged... the product...")
- HOMEMAKERS**
- WINDOW DEMONSTRATION**
- FOOD STORE DEMONSTRATION**
- BRIDGE LUNCHEON**
- SPRING SHOWING**
- A BIRTHDAY PARTY** (with text: "that will make your store the liveliest...")
- KELVINATOR MODELS**
- SALES TRAINING**
- CLOSING SALES**
- YOUR PLAN OF ACTION**
- YOUR MARKET**
- HOSTESS SCHOOL**
- PROSPECT RECORDING AND**

The central photograph shows two men in suits sitting at a desk, looking at documents. One man is pointing at a document while the other looks on.

WITH KELVINATOR'S LEADERSHIP PLAN—you can make more money in 1934

Like a well laid military plan the Kelvinator Leadership Plan for dealers in 1934 leaves no element to chance. The major objective is never lost sight of for an instant and in every step of the most complete refrigeration sales promotion plan you have ever seen there is not a waste moment or movement. What is more—the campaign is individually adapted to the dealer's territory—in your case to your own store and to any particular characteristics of your business that your experience has brought to light.

Glance over the portfolio headings on this page. They suggest the extent to which Kelvinator has planned to produce prospects for each and every dealer. Would you be interested in having a definitely greater 1934 refrigeration volume placed in your hands? The Kelvinator Leadership Plan—every detail of which has been tested for pulling power and practicability—will do it. Write to-day. But do it now. You are just on the threshold of the refrigeration season. **KELVINATOR CORPORATION, 14250 Plymouth Road, Detroit, Michigan.** **Factories also in London, Ontario, and London, England.**

Kelvinator

NEWS ABOUT DEALERS

(Continued from Page 1, Column 1)

A. Carlyle, owner of a furniture store which prospered during the depression because of its second-hand business. Mr. Carlyle said that conditions in his town are on the upgrade, because the two factories mentioned are taking on more men, and the railroad shops are beginning to show signs of real life.

During the three years he has handled Frigidaire, Mr. Carlyle has been his own sales force, has depended on store traffic to furnish prospects, and has gone outside only to contact persons who showed an interest in refrigeration on visits to the store.

Now, however, a salesman is being employed for full-time work on refrigerator and radio (Crosley) selling outside the store. Mr. Carlyle will require him to make systematic canvass calls, will back him up with newspaper, billboard, and direct-mail advertising. Last year, the company sold 25 Frigidaire; this year, said the proprietor, at least 40 will be sold.

"In nine out of 10 cases," he told us, "it is the economy argument that makes the sale for us. In a town of this size and financial condition, nothing interests a prospect quite so much as something that will give some pleasure and at the same time, save money."

At the office and salesroom of the Central Illinois Public Service Co., which had a fine Kelvinator window display, we talked with R. L. McCullick, appliance salesman, who is one of the two men selling refrigerators for the utility this year.

The company, well spoken of by the independent dealers, is dealer for Kelvinator, General Electric and Electrolux, and although it didn't do an outstanding sales job in 1933, it is confident of selling 150 refrigerators this year.

Mr. McCullick finds it a bit easier to sell Kelvinators than G-E's in Mattoon, because about two-thirds of the refrigerators already installed in the town are of the former make, and their name has become familiar to the townspeople. Electrolux sales are hindered by the high price and high pressure of the gas there.

When asked how he sells refrigerators, Mr. McCullick gave an answer almost identical to that of the Frigidaire man: "We talked economy during all of last year. It has been our most effective selling point so far this year, and we're going to use it as the foundation of our presentations all through 1934."

He remarked that "prospects are plentiful this Spring, but money isn't. People are shopping around now, admitting that they will buy a refrigerator soon, but haven't the money yet. Payments being made on appliances already sold are very small."

There are 13 Electrolux refrigerators of the water-cooled type installed in Mattoon homes. During 1933, the 13 owners all visited the utility's office to see if they could make a satisfactory trade for new, air-cooled Electroluxes, we were told.

During our first two visits, we heard complimentary things said about one Clyde Kirk, proprietor of Kirk's Radio & Electric Sales & Service Co., Majestic dealership, so we walked down to 109 S. 19th St. and asked him to tell us about his views on selling in 1934.

From all indications, sandy-haired Mr. Kirk hasn't done a lot of loafing since he started his business in 1928. To date, he has installed 673 Majestic Radios, and has them marked on a city map which hangs in his showroom. Last year, he sold 34 refrigerators, most of them 6- and 8-cu. ft. models. There were a few fours, and only one 5-ft. model in the lot.

This man expects 1934 to be a lot better than '33, not because of any large increase in employment in Mattoon, but because people who already have jobs seem to be growing less afraid of losing them. He and his two outside salesmen will also lay greatest emphasis on the economy of electric refrigeration in their sales presentations this season.

Mr. Kirk has capitalized on the size of Mattoon, which is such that "everybody knows everyone else," in building what he declares is his most powerful sales tool. It is a book of mimeographed questionnaires, filled out and signed by Majestic users in the town, testifying to the satisfaction given them by their refrigerators. To thumb through the book is to receive a good sales talk without a word from Mr. Kirk.

Another part of the booklet is a partial list of Majestic refrigerator users, classified according to their vocations. First is a list of business men; second, professional men; third, Illinois Central R. R. employees; and fourth, Big Four R. R. employees.

Six Doctors Help

Toward the end of last Summer, Mr. Kirk had a little profitable fun fighting for sales to Mattoon citizens who had received copies of F. A. Teigen's "Cancer, the Potential Penalty of Electric Refrigeration," booklet which was discredited by the Aug. 12, 1933 issue of the *Journal of the American Medical Association*.

Six doctors in the town are owners of Majestic refrigerators, and Mr. Kirk used them as allies in battling the cancer propaganda. When a prospect balked at signing the order because of Mr. Teigen's book, Mr. Kirk would whip out his list of doctor-customers, and say:

"Here are six Mattoon doctors who use refrigerators they bought from me. You know them all. Don't take my word for it, but call any or all of them and ask them what they think of this cancer business."

Result: Not one sale was lost because of the booklet during the entire summer, we were told.

Things looked lively in the Montgomery Ward store as we passed it on our way to make another call, so later in the afternoon we stopped in to see Manager E. A. Harmon, and ask him about his store's activity in refrigeration.

Mr. Harmon was cheerful about the business his store is doing at present, even more cheerful about prospects for the rest of the year. Big-ticket sales have shown a marked increase since the first of the year—chiefly, thinks the manager, because jobs seem more secure around the town, and folks are consequently more willing to dip into their savings.

Government loans to farmers are giving the store some business, too, and that's encouraging to Mr. Harmon because he likes to do business with farmers, particularly on large items such as electric refrigerators.

The reason: when a farmer buys something, he generally pays for it all at once, with money he has received from crop sales. Dairy farmers sometimes use the payment plan, because they have a regular monthly income from creameries.

Farmers Buy Trukolds

The store has two outside salesmen working on electric appliances. Last year, they sold about three dozen Trukold refrigerators, a third of them to farmers. Expectations are that the store will move at least 50 per cent more refrigerators this year.

"We're going to change our sales attack this year," said Mr. Harmon. "Last season, we stuck pretty closely to price talk on refrigerators. This year, people are thinking in terms of quality, so our salesmen will use the convenience argument more than anything else. And we're going to concentrate on selling larger models, too."

Illustrating his point about the turn away from price thinking, Mr. Harmon said that early last year, the store dropped its line of gas ranges, because people wouldn't pay the price; they bought kerosene stoves instead. But already this year, there's been a demand for gas ranges, so the store is taking the line on again.

Sam Ball, implement dealer, handled the Norge line last year, but it has since been taken over by the Herron Bros. Jewelry Co. We heard that Mr. White, who is in charge of refrigeration selling for the jewelry store, is doing a good job, and we called twice to see him, but both times he was out visiting prospects.

Mr. White, one of his competitors said, makes most of his sales to the town's railroad men who visit the store frequently to have their watches put in perfect adjustment. There is a Norge standing right beside the watchmaker's cage, where Mr. White can start his selling talk without asking prospects to leave the counter.

Decatur Dealers

Seventy-five miles to the Northwest of Mattoon is Decatur, a city of 57,000 which almost anyone in central Illinois will tell you has taken more

than its share of economic punishment during the past few years.

The town is supported largely by farmers in that vicinity, but during the last couple of years, the farmers haven't had anything to support a town with. Staley's starch company, the Wabash railroad shops, and the town's malleable plants have all been operating on small schedules, but are just beginning to show signs of real life.

Refrigeration men in Decatur are optimistic about 1934. And they check with the Mattoon retailers in their reasons for being so—it isn't that there has been any tremendous amount of re-employment, but conditions have improved to the extent that people who are employed don't live in constant fear of losing their jobs.

Each of the men we talked to in the town put considerable emphasis on the point that Decatur people are refrigeration conscious, that they're pretty thoroughly sold on the need for electric refrigeration, and aren't backward about admitting it.

During the day, your reporter saw evidence sufficient to give these statements some weight. We visited five stores. At two of them, the proprietors were making floor demonstrations when we walked in. During four of our five interviews, prospects came in to inquire about prices, features, etc. And at all the stores, we noticed that many passersby stopped for more than a casual look at the refrigerators in the windows.

First call in Decatur was at the Emerson Piano House, a fine big store at 143 N. Main St. It handles Frigidaire. W. Curtis Busher, one of the owners, was busy demonstrating a 7-cu. ft. model to a prospect, so while waiting we got some of the lowdown on Decatur business conditions from pretty Marian Woodworth, who keeps the books.

Although Mr. Busher has to spend a part of his time in managing the store's affairs, a good many hours each week he is out pounding the pavement, selling Frigidaire. For the past two years, he has been a member of the B. T. U. Quota Club, and has two diamonds in his club button to prove it.

Hope to Sell 450 in 1934

Last year, he and his outside salesmen sold 250 refrigerators at retail in Decatur, and think they'll sell 450 this year. The company is a distributorship with a nine-country territory surrounding Decatur, but gives a good deal of its attention to retail selling.

"Yes, things are picking up," Mr. Busher answered. "The CWA has helped the town some, the railroad shops are taking on a few men, and Staley's plant is doing some hiring. People are beginning to show some willingness to spend money."

"We're so certain that 1934 will be better than '33 that we've hired a new service man, put another field salesman to work, and employed another household salesman (making three, besides Mr. Busher)."

"Refrigeration consciousness," he said, "has grown to such an extent in Decatur that traffic in dealer's stores is producing a good number of actual sales. Consequently, we're going to place less emphasis than before on canvassing, and a great deal more on development of a good floor-selling technique. Our newspaper advertising is being doubled."

Mr. Busher insists that his organization talk deluxe models to practically every prospect, and lay off the small, cheaper models except when absolutely necessary to make a sale. Last year, he said, eight out of every 10 sales were of porcelain models, and most of the refrigerators sold were of the 7-cu. ft. size.

Low Turnover of Employees

Ask Mr. Busher what he's most proud of in the Emerson company, and almost before you've finished your question, he'll come back with, "Our low turnover of employees."

For 21 years, Mr. Busher has been connected with the store, and John F. McDermott, who handles the company's wholesale refrigeration business and manages the office, has 19 years of service to his credit.

One salesman now working on refrigeration has been with Emerson 12 years, another one, 11 years. The store's delivery man started working there 17 years ago, as did the piano tuner. And the comely Miss Woodworth has been making the concern's ledger entries for six years.

"Yes, selling will be different this year from what it was last year. It will be fun this year. In 1933, it was hell. We'll use orthodox sales methods

this season—last year, we had to use strange holds," was the answer we got from Lutz Krigbaum of the Krigbaum Electric Co., Kelvinator dealer on Lincoln Square.

"All last season," he said, "every sale was a struggle. But now, business conditions are on the upgrade, some of the government money loaned to farmers is getting into circulation, and people are going to buy refrigeration more willingly than ever before."

"The thing we're noticed most about the public this year is that it isn't backward about admitting its interest in refrigerators. Last season, it was interested, but wouldn't admit it because of money conditions. I believe Decaturites have started to think about electric refrigeration three months earlier this year than they did last."

The company sold 100 Kelvinators in '33. It has set itself a quota of 150 this year, and thinks it won't have much trouble making it. "People have been out looking at refrigerators for several weeks, and we've noticed," said Mr. Krigbaum, "that they're showing most interest in quality jobs, and in getting a refrigerator large enough for their needs. It wasn't that way last year."

Lost Manual Brings Prospect

Several weeks ago, one of this dealer's two household salesmen (he has one on commercial) had his sales presentation book stolen from his car. The night before we called, a Decatur resident brought the book to the store, said he had found it lying in his front yard. He had read it through, picked out a model he liked, so he made an appointment with Mr. Krigbaum for a demonstration the following Saturday afternoon.

Last May, O. A. Acuff resigned from his position with the utility company in Decatur, rented a little store about a block from the power company's offices, and took on the General Electric appliance line. From late May to Dec. 31, he sold 75 G-E refrigerators, and believes he will sell 300 this year.

Electric Appliances, Inc., is the name of the dealership, and at present its location is 114 N. Water St., but the owner is going to move the store because it is situated between two banks, and after 3 p. m., when the banks close, shopping traffic in that section decreases considerably. The same man has another store in Danville, Ill.

Mr. Acuff hadn't come in yet when we called, as he had driven all night to get back from a dealer meeting held in Chicago the day before by R. Cooper, Jr., G-E distributor there. So while we waited, we talked with Miss Irene Wilt, who sells appliances and manages the office.

Miss Wilt is no novice at the business. She, too, worked with the utility, and is in her eighth year of selling General Electric products.

"How's business?" we asked. "January was good, February was a little worse than fair, and we're going strong this month," was her answer. "Our store traffic is better than it has ever been (during our half hour there, three persons came in to make inquiries about refrigeration). Yesterday, 15 people visited the store to look at refrigerators, and eight of them were very definitely good prospects."

"Decatur has been hard hit the past few years, but depression psychology made conditions seem worse than they really were. Everybody talked depression, even the newspapers, until the people who did have money were afraid to let go of it. Things are beginning to improve now, and our conservative townspeople are getting into the buying mood again."

More Interest This Year

When Mr. Acuff came in, he told us the same things Miss Wilt had said, then went on to say that early interest of Decatur householders in refrigeration this year has evidenced itself in a pleasing, and surprisingly large volume.

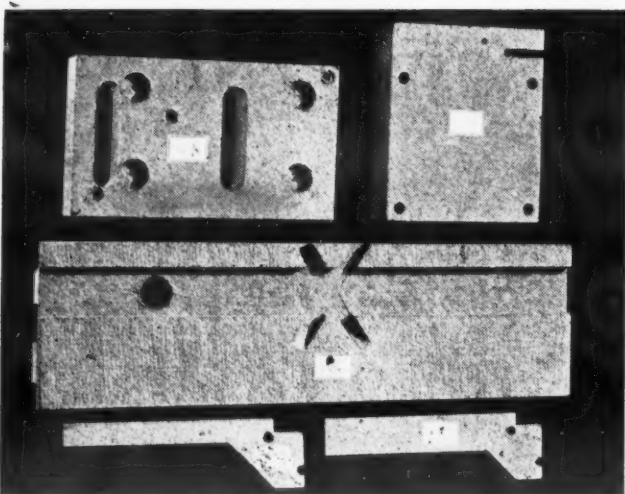
"People are around looking at all makes of refrigerators now. Many of them aren't quite ready to buy, but when they've seen several, they'll start buying as they never have before," was his statement.

"The day of selling the need of electric refrigeration has passed here. It is now a problem of which make to buy. Ordinary job-holders are doing the spending, and since it's economy that interests them most, that is what we will continue to stress. Since last October, the economy appeal has made 90 per cent of our refrigerator sales."

"In 1929, an appliance dealer could

(Concluded on Page 7, Column 1)

Celotex Workability big factor in meeting Cabinet Requirements



Actual examples of Celotex, showing how readily it is machined to meet the practical requirements of cabinet building.

Practical for machining— No heat-leaking joints— Light but sturdy

Cabinet engineers find the workability of Celotex Insulating Cane Board a very desirable advantage in designing and constructing refrigerators and coolers.

For example, Celotex can be readily machined—for the cutting of holes, for beveling, or for notching—and in every other respect it is a thoroughly practical insulating material in meeting cabinet requirements.

A cabinet insulated with Celotex will have no heat-leaking cracks or joints. Each insulated area is covered by a single board cut the precise length, width and thickness.

Another outstanding advantage of Celotex is its light weight, yet in-

herent strength. It is so sturdy that lighter framing members may be used in producing more substantial cabinets.



When using Celotex you can count upon insulating efficiency of the highest degree. It is made of long, tough cane fibres remarkably resistant to the passage of heat. These fibres are sterilized, water-proofed, odorless. Your cabinet is consequently absolutely sanitary.

Celotex engineers have had wide experience in the refrigeration field and know thoroughly the problems involved. You are invited to consult them freely. There will be no obligation.

THE CELOTEX COMPANY, 919 NO. MICHIGAN AVE., CHICAGO, ILL.

CELOTEX
BRAND
INSULATING CANE BOARD
Reg. U. S. Pat. Off.

A Point To Remember—All Celotex Cane Fibre Products are manufactured under the Ferox Process (patented) and therefore effectively resist damage by Fungus Growth, Dry Rot and Termites.

ANSUL REFRIGERANTS	
	
SULPHUR DIOXIDE	METHYL CHLORIDE
Pure and bone dry with its high quality protected by analysis of every cylinder.	Low moisture and acid content. Fast freezing, stable, non-corrosive.
ANSUL CHEMICAL CO.	MARINETTE, WISCONSIN

NEWS ABOUT DEALERS

(Concluded from Page 6, Column 5)

sell on pride of ownership. Today, he has to sell on proof of dollars-and-cents value."

Mr. Acuff said that he and his five outside salesmen have found "ensemble sales" about as easy to make as those of a single appliance. Since he opened the Decatur store, almost 50 per cent of its sales have been for combinations of a refrigerator and a range, a range and a dishwasher, or the like. National and local promotion of all-electric kitchens is responsible for this, he thinks.

He thinks, too, that business of meat markets, grocery stores, restaurants, etc., in the city has improved sufficiently to warrant more intense cultivation of that market for commercial refrigeration business than last year, so has just employed a full-time commercial salesman.

A. F. Schultz, appliance sales supervisor of the Illinois Power & Light Corp., was visited next. His company is a dealer for Westinghouse and General Electric products, and was labelled as clean competition by other Decatur dealers, as were all department stores except one.

He, too, mentioned the fact that people are out shopping for refrigerators, and said, "We will assume this year that prospects are already sold on the need for electric refrigeration, and will direct our sales and advertising effort toward selling the product. Last year we sold about 100 refrigerators, but believe we will top that by 50 units in '34."

Mr. Schultz gives the CWA much of the credit for putting Decatur in a healthier condition than it has been for some time past. Said he: "The CWA helped the laboring man first. He spent the money on immediate necessities. It then passed through a number of channels, and is just now getting to the people who can spend it for refrigerators and similar household items."

Prospects Are Shopping

Typical of all the refrigerator prospects observed during this trip were the people—husband and wife—to whom Frank Beer of the Beer Furniture Co., Norge dealer at 322 N. Main St., was demonstrating a Norge when we walked into his store.

They listened attentively to every word of the presentation, asked a good many questions about construction of the compressor, proper food preservation temperatures, and particularly about operating costs, then admitted frankly that they were ready to buy a refrigerator, but would not make any decision until they had seen the Leonard and another make or two. "We've already seen several," they said.

Mr. Beer got under way with the Norge line early in May last year. Fifty refrigerators were sold by the end of 1933, and of them, Mr. Beer himself sold 43. The other seven were sold by salesmen in the store. He expects his organization to sell 100 this year, and will have one outside man working with him.

Although he thinks conditions in Decatur have not shown much actual improvement, he does say that the spirit of the city is certainly on the upgrade, and is resulting in a willingness to buy on the part of the people who have some money.

Store traffic has been excellent, he reported, and checked with other Decatur dealers by saying that prospective buyers seem more attracted by the economy feature of electric refrigeration than any other.

Shelbyville, Ill.

Third and last town visited on tour was Shelbyville, where this reporter spent practically all the years of his life until college days. What we had heard about the town's being in bad shape economically, we found to be true. Two refrigeration dealers were about the only optimistic people we found during a whole day there.

Shelbyville was one of the last towns in that part of Illinois to get a hand in the New Deal. Except for the Sta-Rite Hairpin factory, which employs about 100 girls when times are good, the farms in that area are the town's mainstay. Trouble is that last season, the drought and chinch bugs ruined all the crops.

There are two men in the town doing a serious job of selling electric refrigeration, and practically any housewife in Shelbyville will tell you that these fellows really get around to see their prospects and the folks think they should be prospects.

One of these men is W. F. Hill, who sells Frigidaires, radios, and furniture for Lantz Bros., Inc., oldest furniture and undertaking establishment in town. He sold a dozen refrigerators last year, and expects to sell 18 or 20 this season.

Mr. Hill told us that some of the money paid by the government to farmers for their surplus livestock (slaughtered and used for relief purposes), and from local CWA projects, is beginning to circulate in the town in sufficient volume to cheer the

people up a bit, and put them in a better frame of mind than they have had for a long time.

"Folks are showing a willingness to listen to a sales story," said Mr. Hill. "And they're especially interested when I can show them how an electric refrigerator will save them money. That's what sold them last year, and will do it this year, because nothing appeals to people in a small town more than a new way to be thrifty."

"These people ask about long-term guarantees, too, because when they buy something, they want it to last. So for an extra \$18, we offer them a four-year service plan. They rarely accept the offer, because the mere fact that we make it convinces them that we expect to be in business in four years. That assurance of stability is all they want."

Mr. Hill finds one of his greatest obstacles in small-town specialty selling that of "crashing" the customer ranks of other dealers in the town. "When a family has been 'trading' with one store for years, it's pretty tough trying to get it even to thinking about doing business with the

representative of another store," he explained.

"People in a town of this size are mighty skeptical about buying anything now. A salesman can't forget to mention one single point about his product, and he generally has to call six or eight times, on every prospect to make a sale."

Seth Parker Broadcast

In this man's opinion, the best advertising Frigidaire Corp. ever did is its current series of Seth Parker broadcasts. Since the program started, 300 people have called at Lantz Bros. for a copy of the Seth Parker booklet offered by Frigidaire.

Mr. Hill will give some attention to commercial business this year, and will be accompanied on his calls by Irvin Schrock, local independent service man, who will make estimates as to the type of equipment needed, while Mr. Hill does the actual selling. O. L. Lewis, another of the store's salesmen, will help on commercial work, too.

W. F. O'Neill is the name of a newcomer in Shelbyville who has probably made himself known to more people there since last Nov. 25, when he arrived, than has anyone else in the same length of time in a good many years.

He is appliance salesman for the Central Illinois Public Service Co.'s branch there, and he claims that since November, he has sold \$4,500 worth of appliances—including 14 refrigerators—in Shelbyville and nearby territories. That was a little hard for us to believe, too, until several business men told us that practically every family around there has bought some sort of appliance from the utility man.

His answer to our how-did-you-do-it question:

"Well, I came in here a total stranger. I didn't know who was a prospect and who wasn't, so I had to start out to see everybody. And the more people I called on, the more I found were interested in appliances, and willing to listen to my sales story. Quite a few of them bought, that's all."

His branch of the utility handles Kelvinator, Westinghouse, and General Electric refrigerators, and Mr. Hill says he will sell 50 of them by the end of 1934.

Crosley dealer in Shelbyville is Culison's Furniture Store, managed by Ward Flanders. No attempt is made at outside selling, and no special refrigeration promotion is planned for 1934, Mr. Flanders told us. The store sold three Shelveadors last year,

hopes to do a little better this year. In stock, and on display in the window, was one new Tri-Shelvador.

A "Rose Poly Man"

When your reporter was a mere lad, there was a boy in Shelbyville named Leonard Montgomery. He was the electrical wizard of the town. He could do fancy things with wires and batteries, and when radio made its appearance, he was about the only fellow around who understood it.

A few years later, he went to Rose Polytechnic Institute at Terre Haute, Ind., and when he graduated, went to work for the General Electric Co., in Schenectady. Then he worked for RCA-Victor in Camden, N. J., and later for the Pilot Radio & Tube Corp. in Lawrence, Mass.

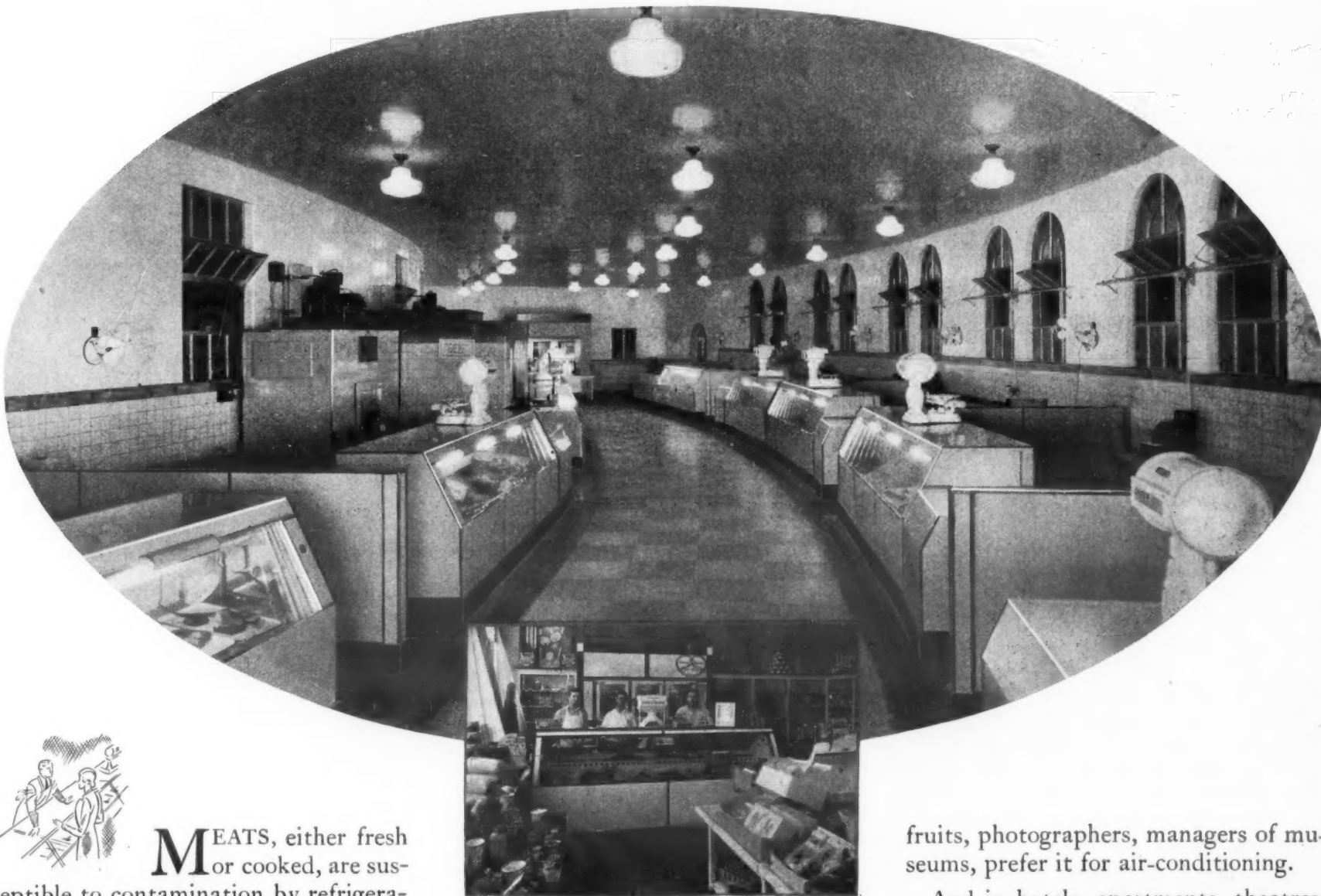
Last year, he came back to Shelbyville and took on the Norge refrigerator line, but we learned when we talked to him that he is planning to drop it shortly because his brother John has a job with the ice company and Leonard wants to avoid any possible friction with the ice plant's management.

Incidentally, the ice plant is owned and operated by the Central Illinois Public Service Co., same organization for whom Mr. O'Neill sells General Electric, Kelvinator, and Westinghouse refrigerators.

"FREON" IS ODORLESS!

that's *one* reason meat market owners

prefer this refrigerant



Above; Municipal Meat Market, New Orleans. "Freon" refrigerant unit by Kelvinator. Below; Ross & Hines Grocery, Minneapolis, Minn. "Freon" refrigerant unit by Frigidaire.

MEATS, either fresh or cooked, are susceptible to contamination by refrigeration gases. It is important that the refrigerant used be free from odor and reaction with the meat.

In this respect, "Freon" is outstanding. It is entirely odorless when mixed with air and cannot change or destroy the taste of meats, sausages, cheese or any other similar products generally sold in meat markets.

That is one reason "Freon" is used so widely by owners of meat markets.

There are others. "Freon" is non-toxic and non-flammable. It is a *safe* refrigerant in every respect.

Many industries have discovered, and are profiting by, the advantages of "Freon." Managers of fur storage vaults, owners of florists' shops and delicatessens, shippers of perishable foods and

fruits, photographers, managers of museums, prefer it for air-conditioning.

And in hotels, apartments, theatres, homes, office buildings and trains, "Freon" is providing safety and comfort cooling and refrigeration to millions of people. It is the preferred refrigerant.

FREON

REG. U. S. PAT. OFF.

a safe refrigerant



KINETIC CHEMICALS, INC., TENTH & MARKET STREETS, WILMINGTON, DELAWARE

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Thumbs Down from TVA

ELECTRIC FARM AND HOME AUTHORITY and the Tennessee Valley Authority, through David E. Lilienthal (president of the former and director of the latter) has turned down the first bids of electric refrigerator manufacturers for business in the Tennessee Valley states to be sponsored by the government.

A fortnight ago several of the major manufacturers submitted their lowest-priced models, shaved a few dollars off the retail price, and set up a display in the Graybar building (headquarters of Nema) in New York. Ranged alongside these refrigerators in the display were "stripped" electric range models and water heaters—all produced to meet TVA specifications.

Mr. Lilienthal came down to New York and looked over the offerings. Prices on the ranges had been reduced from 20% to 30%. Ah! murmured Mr. Lilienthal. That's something like it. And the ranges were approved ("temporarily").

But alas! When he looked over the price tags on the electric refrigerators submitted, he found no such drastic reductions. Small cuts had been made, to be sure, but he had expected something more substantial. These refrigerator fellows apparently didn't get the idea.

"Our objective may call for an entirely new approach in electric refrigerator design," declared Mr. Lilienthal. "In this design costs should be markedly reduced without loss of essential quality and durability. . . . We suggest that, if interested, manufacturers study this matter of new design. . . . In developing it permission is given to adopt such specifications as in the manufacturers' judgment will meet the needs of the public, having in mind our objectives of lowered cost, high quality, and satisfactory performance. Such a program of design may well take several months. To meet the immediate need we recommend that costs be recalculated on the models submitted."

So the refrigerator prices were rejected. And thus refrigerator dealers in the TVA territory are not yet eligible to receive support from the \$10,000,000 fund set aside by the Reconstruction Finance Corp. to finance and promote the sale of low-cost electrical appliances in that territory.

It is reported that General Electric will submit a low-priced range-and-refrigerator combination and that Kelvinator and Leonard are preparing to revise their TVA prices. Others may also endeavor to meet the TVA demand. When, as and if, the refrigeration industry does satisfy Mr. Lilienthal, it is understood that the EH & FA stands ready—not only to finance dealer paper (payments to be made in easy instalments along with the electric bill)—but to inaugurate educational and promotional cam-

paign in behalf of electric refrigeration for the home.

One thing Mr. Lilienthal may have overlooked in handing down his quick decision that electric refrigerator prices were too high is that fact that the electric refrigeration industry has already gone through its paring-down-to-the-bone period.

The electric refrigeration industry has sold, it is estimated, almost a quarter of its potential market. That represents far more than the "cream." It means that manufacturers have had to get down and dig to get into the lower income strata. According to the 1934 REFRIGERATION DIRECTORY AND MARKET DATA BOOK (which will soon be off the press) the average price of electric refrigerators has dropped in this marked fashion: 1920—\$600. 1921—\$550. 1922—\$525. 1923—\$475. 1924—\$450. 1925—\$425. 1926—\$390. 1927—\$350. 1928—\$334. 1929—\$292. 1930—\$275. 1931—\$258. 1932—\$190. 1933—\$175. Isn't that an impressive and significant record?

Mr. Lilienthal's idea that if refrigerator prices were lowered a larger mass market might be opened isn't exactly new or original. Some high-powered engineers and industrialists have been working with that in mind for a number of years. It is reported, for instance, that when General Electric opened its Erie plant for the manufacture of electric refrigerators, one of its best engineers was given a competent corps of assistants, and was assigned to the job of "searching out every conceivable way of producing an electric refrigerator with less cost." His research was to include studies of the most minor items which might offer possibilities for the slightest saving in production costs.

Then there was Bill Grunow, who, back in 1930, announced to a startled world that he intended to cut the price of an electric refrigerator in half. Bill had more than done that in the radio industry. The first to apply genuine mass production methods to console radios, he produced for \$160 a radio which was the equal of those which had previously been selling for \$450 and more. Confidently he expected to do something similar with electric refrigerators.

He plunged into the business of designing special production machinery, which would do in one operation what formerly required three or four (especially notable were his \$275,000 punch presses, which stamped out three sides of a cabinet in one blow, and his electric welding machines, which replaced a whole department of men). He set up a plant which was declared a model, but with all his experience in scientific mass production, with all his unique and modern equipment it was found necessary to sell the first Majestic refrigerators at \$175 and \$195, the prevailing market prices for units of similar specifications.

An electric refrigerator requires, among other things, an electric motor. Over a period of many years the prices of electric motors have been hammered down by many industries. The economies of mass production have already been realized by the motor manufacturers. An electric refrigerator also requires a certain quantity of sheet steel, of fabricated aluminum, and of fabricated copper. Long before Mr. Lilienthal walked into Nema headquarters at New York, engineers found that there was a certain irreducible minimum of parts and materials required in the construction of an electric refrigerator. It should be noted, incidentally, that EH & FA specifications call for porcelain finish on refrigerators sold in the southern seaboard states.

With sales of a million units a year, there is no doubt that the industry is realizing the full benefits of mass production, and that these benefits are reflected in the low prices now prevailing on electric refrigerators. In addition, prices are still hovering around the levels to which they were forced during the worst of the depression when cheap, "fly-by-night" manufacturers undertook to compete by marketing junky "jillopie" refrigerators assembled from parts purchased at keep-the-factory-running-at-any-cost prices from suppliers.

Add to these factors the realization of the ever-lowering income levels which have been successively tapped, and you have some concrete reasons why prices on present types of electric refrigerators probably can't be cut much more.

Can It Be Done?



—Ray Cross in Machias Sentinel.

LETTERS

See Illustration Above

Niagara, Lockport and Ontario
Power Co.
Olean, N. Y.
March 22, 1934.

Editor:

After reading your editorial in the March 14 issue on "Ice Cubes," I enclose the following clipping (shown above) from the *Machias Sentinel*, a weekly newspaper, as a possible solution to the problems contained in your editorial.

W. O. HOWE.

Liberty's Answer to Ice Cube Problem

Liberty Refrigeration Corp.
237 Georgia Ave., Providence, R. I.
March 19, 1934.

Editor:

With reference to your editorial under date of March 14 regarding sticking of ice cubes, we note with a great deal of interest Mr. Potter's compromise, the Frigidaire lever device, and Crosley non-sticking liquid. Please be advised that the new Liberty for 1934 makes no compromise, and requires no accessories to alleviate the feelings of the terrible tempered Mr. Bang.

It is equipped with an automatic Frostoff device which shuts down the cabinet every night at a pre-determined time and for a pre-determined period. No more sticking ice trays—no more prying out with two by four's, or patented levers.

J. H. READ, JR.,
General manager.

Hughes Defends Efficiency Of Rollator

Norge Corp.
Detroit
Feb. 28, 1934.

Editor:

The following letter, sent to A. H. Eustis, is self explanatory. We naturally are a little touchy about having our pride and joy held up to the public gaze as an example of inefficiency—especially when it actually is the most efficient compressor that we know about.

If you have any personal doubts, we would appreciate it if you would have someone drop in here and let me show him the routine tests for rollator efficiency as well as some performance charts which can be compared to competitive reciprocating jobs.

EDWARD HUGHES,
Engineering department.

Norge Corp.
Detroit
Feb. 28, 1934.

Mr. A. H. Eustis, president,
Virginia Smelting Co.,
131 State St., Boston, Mass.

Dear Sir:

We have read with interest your very excellent article on "Refrigerants" in the Feb. 21 issue of *ELECTRIC REFRIGERATION NEWS*. It is somewhat

of a surprise, however, to find your citation of the Norge compressor as typical of the rotary compressors of low efficiency and suitable only for use with low-pressure refrigerants such as methyl formate or carrene. Several hundred thousand Norge rollator compressors are working satisfactorily with sulphur dioxide and our new commercial line is showing equally superior results with methyl chloride.

The Norge rollator operates on an entirely different principle from any other rotary compressor and has a higher volumetric and overall efficiency than any comparable compressor of the reciprocating type that we have ever tested. The rollator moving parts are immersed in oil under the full-head pressure of the unit; and this oil under pressure augmented by centrifugal force operates to prevent any leakage past the rotor.

We feel that your reference to the Norge compressor was unfortunate and has given us some unfavorable publicity which does not correspond with the facts. We would appreciate having your comments on this matter and would like to learn on what information your statements were based.

EDWARD HUGHES,
Engineering department.

Value of Night Calls Shown in Movie

CLEVELAND—Advantages of night calls by salesmen have been dramatized in a sound movie "What Are You Going To Do Tonight," now being shown to General Electric refrigeration salesmen in all parts of the country.

Retail Division Manager A. L. Sealie wrote the script and Monte Brice, who directed the feature, "Moonlight and Pretzels," and other commercial pictures, directed its filming.

The movie tells the story of a young General Electric salesman who wasn't very much sold on the idea of canvassing, sales training, or night calls. Meeting with an accident he is taken to a hospital, and in a delirious stage reviews the value of hard work, training, and night canvassing. As he comes out of his coma, he jumps to his feet with the pronouncement that he's going out to make calls and sell refrigerators.

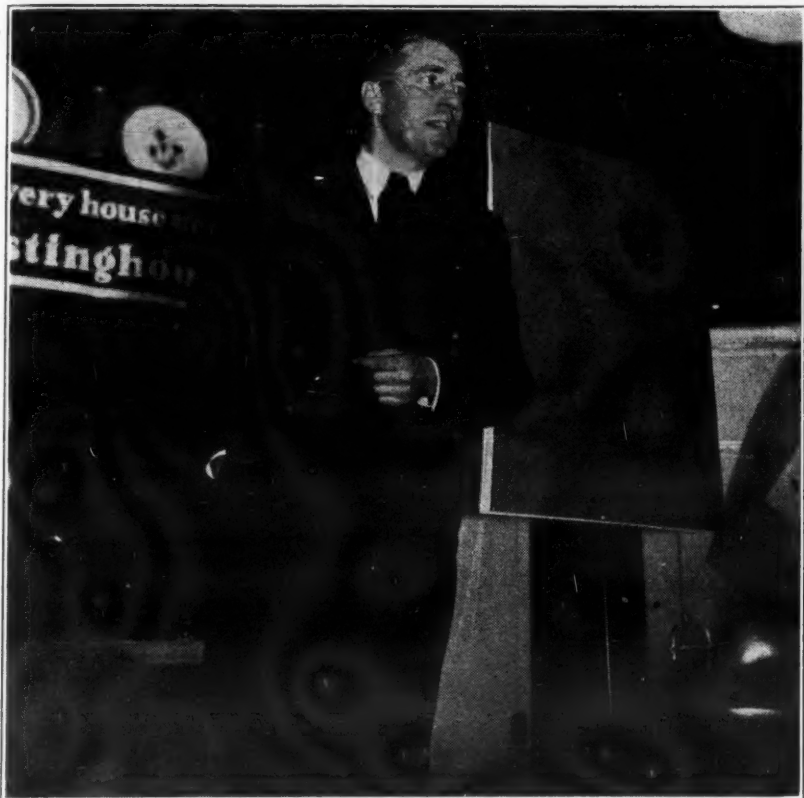
The cast includes Walter O'Keefe, actor and radio headliner; Doris Hill, Paramount feature player; David Herblein, prominent actor; Leo Donnelly; Hugh O'Connell, and Charles Lawrence.

The picture was produced in the West Coast Studios in New York City.

Spangler to Head New Kerotest Branch

ST. LOUIS—Kerotest Mfg. Co., of Pittsburgh, has just opened a new branch office and storeroom at 1337 Market St. here, to facilitate distribution of the company's refrigeration valves, manifolds, accessories, and fittings in this territory. Robert H. Spangler is in charge of the new operation.

His Promises Begin to Take Form



Ralph Leavenworth, Westinghouse general advertising manager, wasn't fooling when he told distributors that a big advertising campaign was scheduled. Field organizations are now preparing for the third step in an eight-part sales promotion program.

Campaign Seeks to Increase Traffic

MANSFIELD, Ohio—Designed particularly to stimulate store traffic during the spring selling season, materials for a new sales campaign have just been released to its dealers by the refrigeration division of Westinghouse Electric & Mfg. Co. here. This is the third of eight selling activities Westinghouse will conduct during 1934.

Part of the spring drive is a "feature popularity contest" plan whereby each dealer invites townspeople to receive a demonstration of 32 Westinghouse features, then write a 20-word statement as to why they like one feature.

Some Westinghouse dealers plan to give a free down-payment for the best statement each week, others a free down-payment every day. Still others give cash and merchandise prizes, and some will give a free refrigerator for the best statement received during the entire contest (April and May).

For further stimulation of store traffic, Westinghouse dealers are advertising a free puzzle called "Scram-Grams" to be given every adult receiving the Westinghouse presentation. The game is arranged to suggest Westinghouse features as a person plays it. Reverse side of the game is imprinted with the story of the feature popularity contest.

Official entry blanks are provided for the contest, and must be left at the showroom by the entrant. They will be distributed as door-openers by salesmen on cold canvass calls, and will also be given out to anybody visiting the showroom.

A motion window display consists of a rustic mill with a large revolving wheel which has one Westinghouse feature shown on each paddle, so that 32 features are presented in one revolution.

Window streamers announcing the feature contest and pennants are being furnished all dealers for use during the drive.

Newspaper advertising mats and plan books are available, stressing Westinghouse features and tying in with the company's "owner satisfaction and loyalty campaign."

Twenty-four-sheet posters saying, "Don't Go Through Another Summer Without a Westinghouse Refrigerator," and "You'll Be Happier With a Westinghouse" are also being used.

There is also a special refrigeration campaign for railroad centers which aims to capitalize on the reputation of the Westinghouse air brake among railroad people.

Fourth advertisement in the Westinghouse "owner satisfaction and loyalty campaign" to appear in the *Saturday Evening Post* on April 24 features a railroad engineer of Lincoln, Neb., who says "I've depended on Westinghouse for 48 years."

With this advertisement as a basis, Westinghouse has prepared: 1. A large poster of this advertisement to be hung in the roundhouses and other strategic points around the railroad yard. 2. A special direct-mail folder. 3. A special newspaper advertisement. 4. A second newspaper advertisement in which the dealer can insert local testimonials.

This spring advertising activity is supported by a Westinghouse campaign in the *Saturday Evening Post* and *Good Housekeeping*.

Sausage Truck Cooled By Kold-Hold Units

MARSHALL, Mich.—William Rimmer, local distributor for Peter Echrich & Sons, Kalamazoo sausage maker, has recently replaced ice and salt delivery trucks with new Kold-Hold refrigerated equipment.

Mr. Rimmer's new truck is equipped with three model H-185 Kold-Hold cooling units operating in conjunction with a 1-hp. Universal Cooler compressor. This equipment is designed to maintain a temperature of 35° F. for a 12-hour service period in a 90° F. outside temperature.

The Kold-Hold cooling units are arranged with shut-off valves so that in moderate weather Mr. Rimmer can cut out one of the units and operate. In cool weather he can cut out two units and operate one. The hook-up prevents the temperature inside the truck from going below the freezing point.

The truck body is 10½ ft. long, 5½ ft. wide, and 3½ ft. high. Insulation is 2 in. cork throughout.

Merchandising Division Set Up by Rex Cole

NEW YORK CITY—With its purpose that of coordinating and assisting in the activities of all the company's sales divisions, a new merchandising department has just been organized in Rex Cole, Inc., G-E distributorship here. Merritt Lum heads the new department.

Work of the division, as explained by Robert Stevenson, Cole's vice president and general manager, includes market research, market analysis, supervision of sales training, outlining of territorial quotas on the basis of a recent city census, supervision of demonstration and installation, and promotion of kitchen planning.

36 Frigidaire Meetings Attended by 14,361

DAYTON—Largest turnout of dealers and salesmen in the history of Frigidaire Corp., was reported last week by H. W. Newell, vice-president, following the last of 36 spring sales conventions held throughout the country during the past four weeks.

Of Frigidaire's more than 15,000 dealers, salesmen, department store merchandising managers, utility refrigeration sales managers and district executives, 14,361 registered at the conferences, Mr. Newell stated.

The four convention troupes, headed by Frank R. Pierce, sales manager, W. D. McElhinny, commercial division manager, J. J. Nance, air-conditioning division manager, and Lee A. Clark, sales promotion manager, returned to Dayton last week after completing a schedule that took them into practically every state.

Distributors Compete in New Sales Contest

MANSFIELD, Ohio—A series of contests in which each distributor is pitted against another distributor has been announced by R. C. Cosgrove, manager of household refrigeration sales of Westinghouse Electric & Mfg. Co. here.

The competitions will be conducted as a part of the Westinghouse refrigerator "Going to Town Contest" described in last week's issue of the *News*. The matches are based on the percentage of quota made by the distributors—"victory banners" to be given distributors who win their respective contests.

Distributors will report their sales to the factory, and standings will be announced every Wednesday afternoon during the contest period.

Negro Salesman Has Envious Record

PHILADELPHIA—David J. Sullivan, first colored salesman to join the retail organization of Judson C. Burns, General Electric distributor, has hung up a record for other new salesmen to shoot at by making a bonus every month for the first three months of his activity.

Mr. Sullivan was employed by John Convery, retail sales manager, who felt there was a place for a colored salesman to contact some of the colored residents of Philadelphia.

Harrison Dealers Have All-Electric Kitchens

NEWARK, N. J.—Four dealers in the territory of Philip H. Harrison & Co., General Electric distributor, have recently equipped their showrooms with complete General Electric kitchens.

The dealers include Hartmann Hardware & Supply Co., Somerville; Dorsey Motors, Inc., Perth Amboy; Plainfield Motor Co., Plainfield; and T. H. Dougherty, Inc., Morristown.

General Electric kitchens previously had been installed in three of the distributor's branches at Newark, East Orange, and Red Bank and also in the showroom of the Bernardville, N. J., dealer, Louis Corrado.

Lang to Head Grinnell Oil Burner Sales

GRINNELL, Iowa—L. P. Lang has been named head of the new oil burner division of the Grinnell Electrical Mfg. Co. in charge of distribution and sales.

Photographs Tell Story Of Humidity Guides

CHICAGO — "Atmosphere" is the title of a new house organ published by Fee & Stemwedel, Inc., here, maker of the Airguide air condition indicator and the Airguide thermometer, clock-like instruments which tell both temperature and humidity in the office or home.

It is edited in *Time* style—captions, streamers, and all. Feature of the sheet is its candid camera photography—photos of office workers, salespeople and buyers who express their opinions of Airguide in the publication. It is edited by the Rosenow Co.

Radio Firms Asked to Study New Market

WASHINGTON, D.C.—Radio manufacturers have been advised by Rex Martin, assistant director of aeronautics, to study the possibilities of marketing automobile receiving sets capable of picking up weather broadcasts from Department of Commerce aeronautical radio stations.

Such broadcasts are sent out on frequencies between 200 and 400 kilocycles.

Some automobile drivers, according to Mr. Martin, already depend upon these weather reports for guidance in planning trips, and automobile test tracks and automobile clubs also make use of them.

200 Rackliffe Dealers Attend Convention

NEW BRITAIN, Conn.—More than 200 dealers and their salesmen were on hand to greet the new Kelvinator line and 1934 sales plan at the meeting held here March 12, by Rackliffe Bros. Co., Inc., distributor for Connecticut and Western Massachusetts.

The meeting was held under the direction of J. A. Harlan, commercial sales manager of the Kelvinator Sales Corp. During the meeting R. I. Petrie, domestic sales manager, addressed the meeting via telephone and loud speaker.

7 Distributors Named for Automatic Washers

NEWTON, Ia.—Seven new distributors are now handling the line of washing machines and ironers manufactured by the Automatic Washer Co. of this city.

The new distributing organizations, as announced by Roscoe N. Bradt, include the following:

Morley Brothers, Detroit; Ransom Electric Co., Nashville, Tenn.; Frank H. Clay Co., Kalamazoo, Mich.; Harrisburg Standard Electric Corp., Harrisburg, Ill.; Mueller Lumber Co., Denver, Ia.; Northeastern Radio Co., Boston; Radio Supply Co., Boise, Ida.

Brookbank to Distribute Century Burners

WASHINGTON, D. C.—J. S. Brookbank has been named distributor here for Century oil burners. Temporary headquarters of the new distributorship are at 2701 14th St., N. W.

In electrical refrigeration, men and women buy a result rather than a product. Therefore, to us it is of first importance that Universal Cooler units give dependable performance at all times. Our engineering and manufacturing facilities always have been and always will be pointed to this end.



UNIVERSAL COOLER CORPORATION
DETROIT, MICHIGAN BRANTFORD, ONTARIO

MANUFACTURERS OF A COMPLETE LINE OF HOUSEHOLD AND COMMERCIAL REFRIGERATION EQUIPMENT

300 Harten-Knodel Dealers Convene

CINCINNATI—Harten-Knodel Co., Norge distributor here, was host to 300 dealers and salesmen recently at Hotel Gibson, when the 1934 line and sales program were presented by Norge officials.

Men who took part in explaining details of the '34 campaign were: John H. Knapp, Norge vice president in charge of sales; R. E. Densmore, western sales manager; J. E. Oliphant, regional manager; Walter Seiler, vice president of the Cramer-Krasselt Co., Norge advertising agency; Betty Appel, home economist; W. H. Crawford, vice president of Commercial Credit Co.; and Glenn O'Harra.

Howard E. Blood, president of Norge Corp., and H. H. Whittingham, assistant sales manager, were in Cincinnati on business and took part in the dealer meeting.

Correction

Due to an error in the original statement given by Kelvinator Corp. to *ELECTRIC REFRIGERATION NEWS*, the story published in last week's issue to the effect that Kelvinator Corp. was paying a dividend to stock of record March 22 was incorrect. The dividend will be payable to stock of record March 27.

Dealer Takes Oil Lease In Trade Deal—Now He's in Florida

PENNSBORO, W. Va.—J. B. Murphy, Kelvinator dealer here, is mighty glad now that he didn't pass up the deal in which he installed a D-90 Kelvinator in Howard's filling station at Ellenboro.

For several months Mr. Murphy had been trying to sell a Kelvinator to Mr. Howard. The prospect finally made Mr. Murphy a proposition, declaring that if Mr. Murphy would take a 1/64 interest in an oil and gas lease he owned, the D-90 could be installed in his filling station in Ellenboro.

Mr. Murphy did his best to sell the 1/64 share in the oil lands, but was unsuccessful, so he resigned himself and called it a deal, the Kelvinator being delivered when Mr. Howard paid the cash balance.

Within a very short time a well on the lands covered by the lease came in with a rush—more than 700 barrels a day. Mr. Murphy was able to take his income for several months at the rate of more than \$200 a day and purchased a 1/16 interest in the lease. Then he sold his original 1/64 interest for \$3,000 and took a vacation in Florida.

Despite his sudden good fortune, Mr. Murphy has declared his intention to continue as a Kelvinator retailer.

Westinghouse Sends 7 Crews into Field

MANSFIELD, Ohio—Seven crews, comprising factory representatives, field representatives, and distributor representatives, hopped off last week to tell the story of the Westinghouse "Spring Selling Activity" to Westinghouse retail organizations in all parts of the country.

The "Spring Selling Activity" is the third act of the eight-part sales program which Westinghouse has planned for their dealers and salesmen during 1934. It will run from April 1 to May 31 and is designed to close those prospects which have been obtained during the two preceding activities, and also to build display room traffic for all Westinghouse dealers and make it easier for salesmen to make frequent demonstrations.

Factory men who are heading the sales crews are R. C. Cosgrove, manager, household refrigeration sales; Gil Baird, editor, *Cold Selling Talk*; Clyde Moran, V. E. Vining, T. J. Newcombe, and S. M. Davison of the household refrigeration sales division. P. C. Wilmore of the merchandise advertising department, who was to head one of the crews, has been forced to remain in Mansfield because of the illness of his wife, and another factory representative will be substituted.

The cities which the crews headed by each of these men will visit include the following:

R. C. Cosgrove—Birmingham, Ala.; Atlanta, Ga.

Gil Baird—San Francisco; Seattle; Portland; Los Angeles; San Diego; Salt Lake City; Denver.

Clyde Moran—St. Louis; Little Rock; Dallas; San Antonio; Houston; Corpus Christi; El Paso; Oklahoma City; Tulsa; Kansas City; Wichita. V. E. Vining—Chicago; Milwaukee; St. Paul; Minneapolis; Omaha; Des Moines; Sioux City; Peoria; Springfield, Ill.; Rockford; Ft. Wayne; South Bend; and Indianapolis.

T. J. Newcombe—Boston; Springfield, Mass.; New York City; Newark; Albany; Syracuse; and Buffalo.

S. M. Davison—Philadelphia; Camden; Scranton; Huntington, W. Va.; Baltimore; Washington, D. C.; Richmond.

P. C. Wilmore (or substitute)—Raleigh; Charlotte; Columbia; Atlanta; Jacksonville; Tampa.

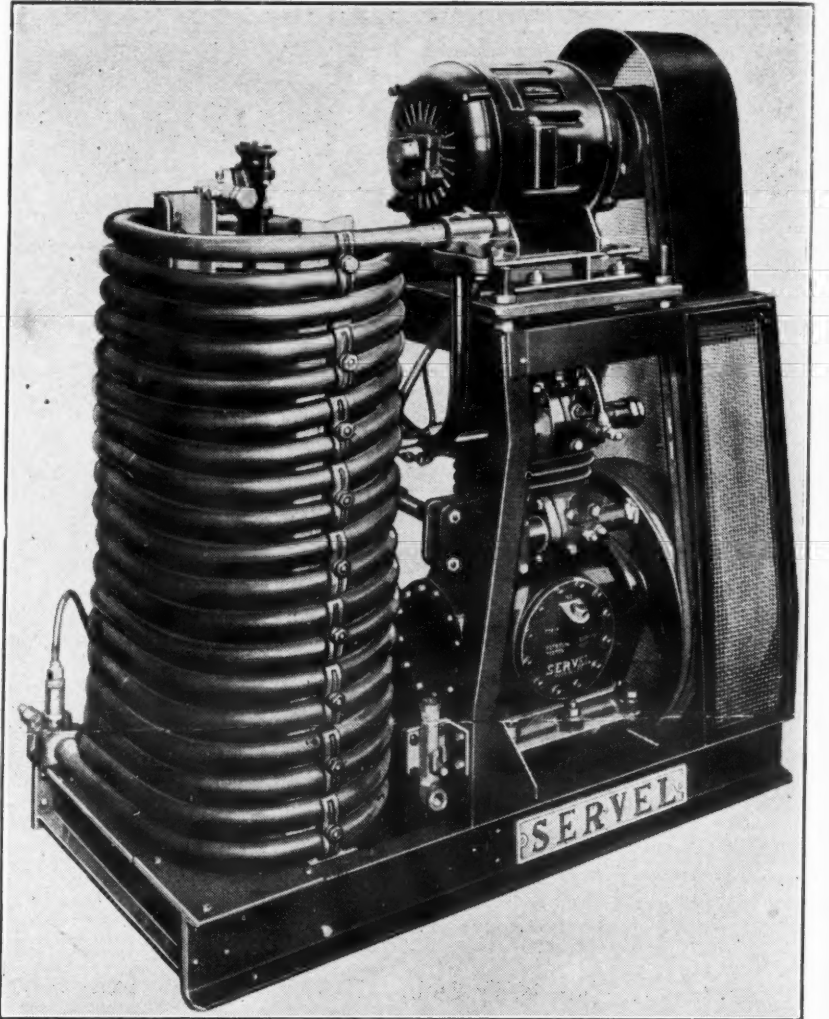
Survey Shows Large Farm Market

WASHINGTON, D. C.—A report issued by the Farm Housing Survey for Rockingham County, Va., shows that of 3,346 farm houses in the county, only 160 are equipped with mechanical refrigerators.

Ice boxes of one kind or another are owned in a little over 40 per cent of the homes. On the farms were found 761 hand washing machines and 779 power washing machines.

When asked what they would spend \$500 for in improving their homes if they had that amount, 22.4 per cent of the farmers of Rockingham County reporting mentioned the installation of a water system; 19.8 per cent mentioned installation of bathroom equipment; 17.6 per cent would improve exterior walls; 15.1 per cent said "electricity"; and 13.4 per cent mentioned lighting systems.

Designed for Heavy-Duty Installations



A new series of Servel condensing units in this design will be used for air-conditioning and commercial applications.

Hadley Syndicate Will Sell Liberty Line

(Concluded from Page 1, Column 5)

stores, have also taken on the Liberty household line, according to Mr. Sheeran.

Exclusive export representation on the Li-Beer-Ty beverage cooler and Fountainette has been taken by Melchior, Armstrong, Dessau Co., of New York City, but representation on domestic cabinet export will continue to be in the hands of the export division, Liberty Refrigeration Corp., with offices recently opened at 11 Moore St., New York City, under the direction of J. Gossner, export sales manager.

Manufacturers Drop Cookery Council Plan

NEW YORK CITY—The National Electric Cookery Council, organized three years ago to carry out a three-year program of electrical cookery promotion throughout the country, is to be disbanded, it was announced following a recent meeting here of the electric range manufacturers sponsoring the council.

The cooperative program will be abandoned because of the desire of range manufacturers to concentrate their efforts and available funds in working with the Electric Home & Farm Authority in supplying low-cost ranges to residents in the Tennessee Valley Authority region. Ranges offered for sale in this program have been accepted by the EH & FA.

Warner Issues Extra Paper for Leonard

SYRACUSE, N. Y.—L. J. Warner, president, Warner Distributing Corp., pulled a surprise at the Leonard dealer meeting held here recently when newsboys ran into the meeting with a special "Leonard Extra" edition of the *Syracuse Herald*, with a "Leonard Crashes Through" streamer and a big two-column story on the front page.

Distribution of the newspapers climaxed the meeting in which the new Leonard line and sales plan was introduced to 250 Warner dealers and salesmen by factory officials including Godfrey Strellinger, general sales manager; R. R. Ludington, assistant sales manager; B. T. Roe, divisional sales manager; Sam Mitchell, advertising director; and C. M. Armstrong of ReDisCo.

Summer Weather for Phoenix Meeting

PHOENIX, Ariz.—Grunow dealers in the territory of Watson & Wilson, Los Angeles distributor, met real refrigeration weather recently when they journeyed here for a dealer meeting on a day when the thermometer registered 91° F.

Servel Adds Line of Large Capacity Units

(Concluded from Page 1, Column 3)

Compressors are two-cylinder models with 3 1/4-in. bore and 3 1/4-in. stroke.

Motors on the new models are standard 3-phase, 220/440-volt, 60-cycle, double squirrel-cage, high-torque, low-starting current type.

Model 500-AW is equipped with a 5-hp. motor, but may be had with a 7 1/2-hp. motor for back pressures of 8.5 lbs. or greater. Model 700-AW is equipped with a 7 1/2-hp. motor but is also available with a 10-hp. motor.

Model 500-AW stands 60 in. high, 26 in. wide, and 48 in. long. Model 700-AW is 55 in. high, 26 in. wide, and 48 in. long.

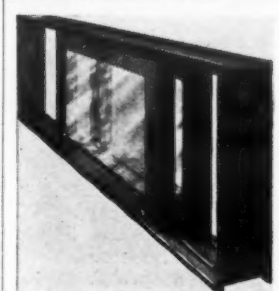
Capacities of the 500-AW model based on 75° F. inlet water, 110° F. outlet, and approximately 100 lbs. head pressure, are as follows:

Suction Pressure (lbs.)	I.M.E.	
	1 Hr.	16 Hrs.
4	187	3,000
6	221	3,500
8	254	4,000
10	288	4,600
14	356	5,700
18	422	6,750
22	492	7,900
26	555	8,900
30	615	9,800

Capacities of the 700-AW model, based on 75° F. inlet water, 110° F. outlet, and approximately 100 lbs. head pressure, are as follows:

Suction Pressure (lbs.)	I.M.E.	
	1 Hr.	16 Hrs.
4	270	4,300
6	316	5,000
8	360	5,700
10	408	6,500
14	502	8,000
18	600	9,600
22	690	11,000
26	790	12,600
30	895	14,300

ACE HARD RUBBER REFRIGERATOR ROLLER BEARING DOORS-DOOR FRAMES

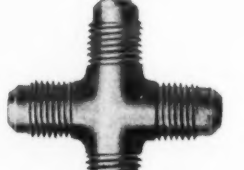
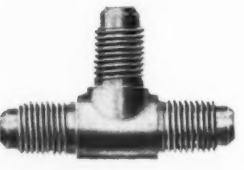
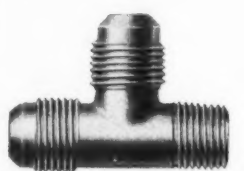
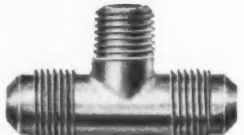
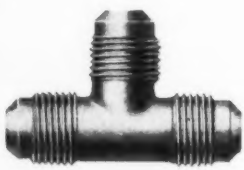


Roller bearings in lower groove—the new and improved feature of Ace hard rubber door frames.

For commercial display cabinets, doors... Door Frames... Slide Rails... Jamb... Glazing Strips... Trim... Many standard and special sizes and parts... Catalogue and prices on request.

AMERICAN HARD RUBBER COMPANY
11 MERCER STREET, NEW YORK, N. Y.
Akron, Ohio—111 West Washington St., Chicago, Ill.

Seepage-Proof - - Tees, for instance



We illustrate only four standard refrigeration tees, as well as a standard Tube-end cross, made from hot forged brass, to remind users of refrigeration fittings that Commonwealth is headquarters for fittings of any style, size, or combination of pipe and tube ends.

Every needed fitting for the refrigeration industry is available at Commonwealth, invariably from stock, although special orders are quickly handled if the desired combination should not be on hand.

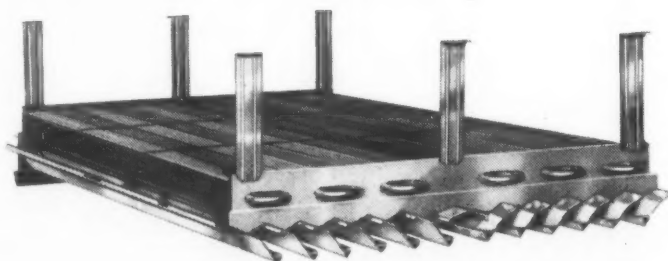
Particular care is taken with every detail of manufacture, inspection and shipping so that the customer may be sure these fittings are

"Built Right - to Stay Tight"

Send for our Catalog No. 36.

COMMONWEALTH BRASS CORP.
Commonwealth at G.T.R.R.
Detroit, Mich.

GET OUT OF THE MUD



of Selling Commercial Refrigeration on **ENGINEERING DETAILS.**

Your customer is not interested in the carbon content of your crankshaft.

SELL HIM STYLE

Focus his attention on the **NEW PEERLESS FLASH COOLER**

Cover the ceiling of his refrigerator with the Gleaming Sparkle of the polished aluminum drip pan of the **PEERLESS FLASH COOLER** and forget about "bore and stroke," "four-bearing crankshafts," and "square feet of surface."

SELL HIM STYLE — SELL HIM RESULTS!

Use a smaller size compressor with this **NEW Integral Coil and Drip Pan**—and give him **BETTER REFRIGERATION.**

Wire — Telephone — or Write for Catalog and Prices

PEERLESS ICE MACHINE CO. 515 W. 35th St. **Chicago, Ill.**

Found Fellowship to Study Food Storage

PITTSBURGH—Dr. Edward R. Weidlein, director, Mellon Institute of Industrial Research of this city, has announced the foundation of an industrial fellowship by Toledo Precision Devices, Inc., an associate organization of the Toledo Scale Co., for the purpose of investigating problems involved in food merchandising, and especially in the storage and display of food during distribution through wholesale and retail grocers.

It is believed that studies of food keeping ability in the laboratory and in cooperation with the distributing trade will result in the acquisition of technical information leading to improved methods of food distribution through grocery stores, Dr. Weidlein states.

Seek Better Quality Foods

Further pertinent data, in addition to the information now available concerning changes occurring in such grocery merchandise as fresh fruits and vegetables, meats, dairy products, bread, and pastry during distribution, are expected to make foods of better quality available to the consumer, to eliminate some sources of spoilage losses to the food merchant, and to form a contribution of value to the food trades generally.

Where such a course seems justifiable, information now available or acquired during the research will be published in convenient form for the use of the grocery trade.

Graduate of Dennison

Marion D. Coulter, the incumbent of this Fellowship, was graduated from Dennison university in 1920 and did graduate work at Ohio State university leading to the M.S. and Ph.D. degrees in 1923. From 1923 until 1925 he was a member of the chemistry department of Louisiana State university. From 1925 until 1930 he was engaged in research on the series of fellowships on insulating lumber maintained by the Celotex Co. at Mellon Institute, and during 1930-1 was a research chemist with this company at Chicago. During 1931-3 Dr. Coulter was engaged in research on food packing problems on the Mellon Institute fellowships sustained by the Robert Gair Co.

Cooper Gets \$11,000 Commercial Order

CHICAGO—As a part of its modernization program, the University club of this city has just placed an \$11,000 order for commercial refrigeration equipment with R. Cooper Jr., Inc., General Electric distributor here, according to S. Nides, sales promotion manager. George R. Larsness, manager of the water cooler department, made the sale.

Included in the equipment are six CMF8-W 5-hp. compressors, one CMF6-W 2-hp. compressor, a CMF6-W 1½-hp. unit, a CM4-W ¾-hp. compressor, and one CM4-A ½-hp. compressor.

These units will cool refrigerators for the following: wine and beer, pantry purposes, dairy products, meat, second cook's use, oysters and fish, pastries, fruits, cheese, and general storage of meat, poultry, and ice.

New equipment to be refrigerated by the compressors includes a game refrigerator, a 300-gals. per-hour water cooling system, and a 3,000-lb. ice-making system.

Ferro Enamel Corporation Shifts Personnel

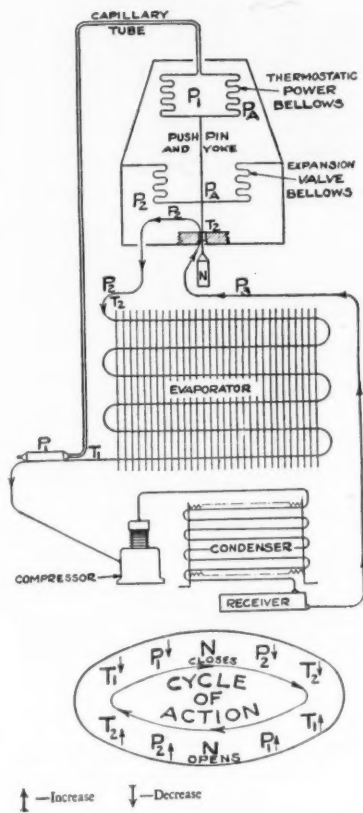
CLEVELAND—Several changes and additions have been made recently in the personnel of the Ferro Enamel Corp. here.

Dr. J. T. Robson, formerly of the Allied Engineering Co. in Columbus, has been appointed to direct all laboratory and research activities of the company, including service work, on Ferro porcelain enamels. Harry E. Ebright, who previously handled this work, becomes an executive officer.

F. M. Hartford has assumed complete charge of the engineering department of the company, after several years as director of pottery-kiln engineering of the organization's Allied Engineering Division.

New member of the service staff is Glenn Hunt, formerly of the porcelain plant of Frigidaire Corp. in Dayton.

Fedders 'Dual Control' Valve



The diagram above shows the cycle of action and illustrates how the Fedders thermostatic expansion valve provides dual control of the refrigerant in evaporators.

By following the oval cycle of action chart in a clockwise direction, it will be seen that when the temperature (T_1) decreases at the thermostatic power element bulb at the evaporator outlet, the pressure (P_1) decreases in the bulb and thermostatic power bellows. The bellows then contracts, thus closing the needle valve (N). This makes the refrigerant pressure (P_2) decrease at the suction side of the valve and the inlet of the evaporator. The temperature (T_2) then decreases, due to the throttling action of (N) causing a flow of a lesser amount of refrigerant at a lower pressure and temperature. This lesser amount of refrigerant evaporates before reaching the outlet of the evaporator, causing the temperature (T_1) at the outlet to increase.

Then, as the temperature (T_1) increases at the evaporator outlet and thermostatic bulb, the pressure (P_1) increases in the bulb and thermostatic power bellows. Then the bellows expands and opens the needle valve (N). The refrigerant pressure (P_2) and temperature (T_2) increase at the suction side of the valve and the inlet of the evaporator as a new supply of liquid refrigerant is admitted to the evaporator.

As the refrigerant evaporates, the temperature (T_1) decreases and the cycle of action repeats.

Baltimore Department Store Buys Auditorium System Using Steam Jet

BALTIMORE—Chatard & Norris, Inc., agent for "Auditorium" air-conditioning systems, reports the installation of air conditioning for the first floor and basement in the Hutzler Brothers Department Store at 212 North Howard St. here.

The apparatus includes Westinghouse steam jet refrigeration and American Blower ejector outlets. Steam supply for the steam jet (located on sixth floor level) is being furnished by the Consolidated Gas Electric Light & Power Co.

Herbert G. Crisp & James R. Edmunds, Jr. were the architects and James Posey, the engineer on the installation.

New ABC Distributors Are Announced

CHICAGO—Four new distributors have just been franchised by the Automatic Burner Corp., manufacturer of ABC oil burners here. They are: Stern & Co., Hartford, Conn.; Erskine-Healy, Inc., Rochester, N. Y.; Zork Hardware Co., El Paso, Tex.; and the F. B. Connelly Co., with branches in Seattle, Tacoma, Wash. and Portland, Ore.

Depot Cafe Helped By Air Conditioning

LANCASTER, Pa.—Air conditioning plays a prominent part in the success of the Lancaster Bus Depot, which has made its restaurant one of the most popular eating places in the Lancaster section.

The whole station is finished in early Pennsylvania Dutch fashion, with murals of early scenes on the walls. Linoleum and tiles scrupulously clean and with the air cool and wholesome, the dining room receives a large patronage from the surrounding section. Adjoining is a lunch room for quick service, which daily serves approximately 1,000 bus passengers.

The dining room is equipped with Frigidaire air conditioning, including a 10-ton compressor, connected to a heavy duty unit in the vestibule and three vertical floor type units. Heating coils and other vertical type conditioners have been installed by Frigidaire for heating the rest of the building.

Other Frigidaire equipment in this bus station includes six evaporators in two kitchen refrigerators and a cold storage room in the basement, a water cooler and cooling equipment in the large soda fountain.

Refrigerators Installed In Modernized Apts.

ST. PETERSBURG, Fla.—Installation of 14 new Kelvinators formed part of the modernization program for the exclusive Snell Isle apartments here.

The sale and installation was made by T. H. Rifley, manager of the local Kelvinator Sales and Service.

Orders Increase for Dry-Zero Slabs

CHICAGO—Dry-Zero Corp.'s shipments of pliable slab insulation to electric refrigerator manufacturers during the first two months of 1934 were three times greater than shipments during the same period last year, according to Harvey Lindsay, Dry-Zero president. This year's business, he reports, is running more than 20 per cent ahead of 1932, Dry-Zero's previous peak year.

Shipments in January this year were three and one-half times those in 1933 and 20 per cent ahead of 1932. Shipments in February were two and three-fourths times larger than last year and slightly above 1932. Increase in dollar volume was slightly below the gain in shipments due to lower prices.

Shipments of Dry-Zero blanket and sealpad insulation to truck body builders also show an increase. Business for the first two months of this year is double the 1933 volume and 50 per cent ahead of 1932.

Greatest increase was shown in the railroad insulation field. Shipments for January and February to railroads, private car lines, and car builders were four times shipments for the entire preceding year.

Langmuir Made Honorary Chancellor of College

SCHENECTADY, N. Y.—Dr. Irving Langmuir, associate director of the research laboratory of the General Electric Co. has been appointed honorary chancellor of Union College, of this city, for the current year, it has been announced by Acting President Edward E. Ellery of the college.

EARNINGS

Westinghouse Electric & Mfg. Co.

NEW YORK CITY—Westinghouse Electric & Mfg. Co. showed a loss of \$8,636,841 for the last fiscal year, a slight improvement as compared with the previous year, when the company showed a loss of \$8,903,540. (This report is for the entire Westinghouse company and not for the refrigeration division alone).

The report mailed to shareholders last week discloses that the company received orders totaling \$72,473,117 last year, compared with \$69,082,468 the preceding year, the increase amounting to about 5 per cent.

Contrast in Years

There was a decided contrast, however, between the two years, A. W. Robertson, chairman of the board of directors, and F. A. Merrick, president, point out in their letter to shareholders.

"In 1932," they explain, "the trend was downward during the year, whereas in 1933 the trend turned upward starting from the low points in January. The volume of business received in the last six months of 1933 was 48 per cent greater than the volume received in the same period of the previous year."

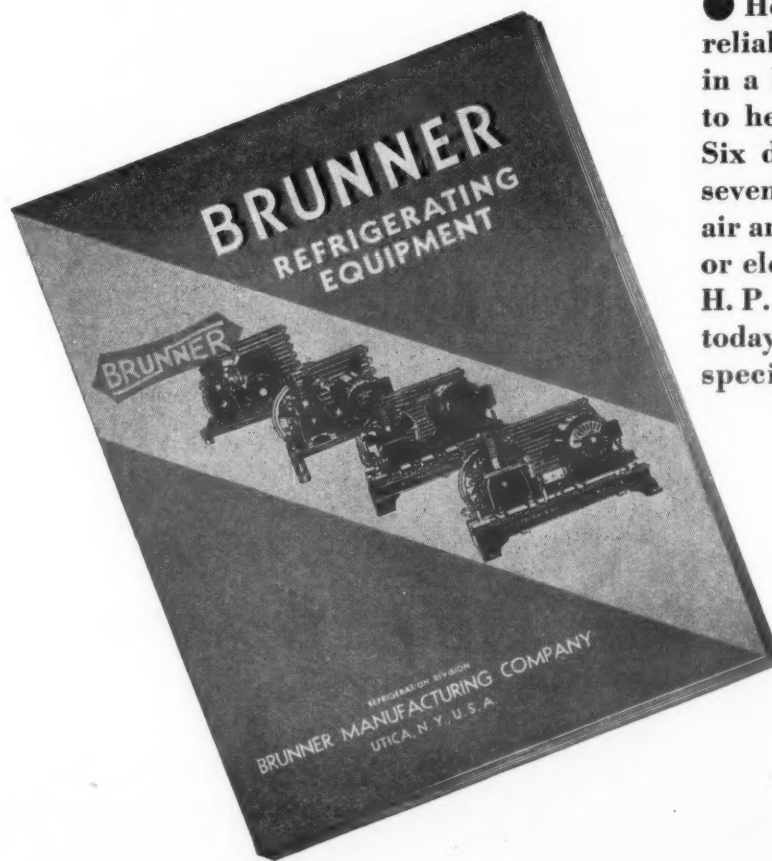
Sales actually billed in 1933 were \$68,188,353, compared with \$77,073,586 in 1932, a decrease of 11½ per cent.

Ending the year in a strong financial position the company showed an excess of current assets over current liabilities of more than 16 to 1. Current assets totaled \$75,379,755 against current liabilities of \$4,554,537, leaving net working capital of \$70,825,218.

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to help you sell

BRUNNER REFRIGERATION EQUIPMENT



● Here's Brunner's whole line of reliable refrigeration equipment in a brand new catalog compiled to help you create new business. Six dependable compressors . . . seventeen efficient high sides . . . air and water cooled . . . gas engine or electric . . . in a range from 1/6 H. P. to 3 H. P. Rush the coupon today for your copy. Study the specifications of these rugged Brunner units. Compare their construction. Note their price! There can be but one conclusion.

Brunner was designed for and will compete simultaneously with both quality and price markets. A double killing for you if you act in double quick time. Mail that coupon tonight.

Send for YOUR COPY NOW!

BRUNNER

A Name Built by 27 Years of Service

Brunner Manufacturing Co., Utica, N. Y.

Rush me your new catalog, BRUNNER REFRIGERATION EQUIPMENT.

Name _____

Company _____

Address _____

DETROIT LUBRICATOR COMPANY
TRUMBULL, LINCOLN, MARQUETTE & VIADUCT
DETROIT, MICH.

Manufacturers of "Genuine Detroit" Automatic and Thermostatic Expansion Valves, American Cubemakers, American Refrigeration Sections, Automatic Controls for Temperature and Pressure, Electric Valves for Refrigerant and Water Control, Thermostats, Humidistats and complete controls for Air Conditioning.

Descriptive literature gladly sent upon request

Division of

AMERICAN RADIATOR & STANDARD SANITARY CORPORATION

224 New Retailers Named by Leonard

DETROIT—Eight new distributors and 224 dealers were appointed by the Leonard Refrigerator Co. during February, according to Godfrey Strelinger, sales manager.

Hughes & Co. of Spokane was franchised for the Spokane section of Washington and parts of Montana and Idaho. Edward H. Hughes is president of the organization, and Frank J. McDonald will direct refrigerator sales.

H. R. Curtiss Co. becomes the company's distributor in San Francisco, and the Kansas City Philco Co. was named to represent Leonard in that area.

Other New Distributors

Other new Leonard distributors are Taylor Distributing Co., San Antonio; Mullin Furniture Co., Dodge City, Kansas; Bertram Motor Supply Co., Boise; Cain Radio Co., Jacksonville, Fla.; and Ferrell-Wight Co., Albany, Ga.

The newly appointed dealers are as follows:

Albany: Tinscher Refrigeration Service, Mobile.

California: Home Furniture Co., Alhambra; J. J. Le Ferore & Sons, Anderson; Andrew Siebak, Antioch; Stinson Drug Co., Arbutus; L. J. Apple, Berkeley; George C. Miller, Clovis; E. C. Groham, Concord; Maywood Garage, Corning; Hanson Hunter Co., Fortuna; Messner Electric Co., La Jolla; E. A. Sangstad, Lincoln; Livermore Commercial Co., Livermore; Modesto Hardware Co., Modesto; F. A. Pritchett, Mountain View; Jensen & Thomas, Nevada City; Whitehurst Bros., Newman; Smith Electric Co. and Campbell, Sullivan & Furth and A. C. Burrell, Oakland; Dovi Furniture Co., Pittsburgh; Standard Furniture & Mattress Co., San Diego; Union Furniture Co., San Francisco; Union Furniture Co., San Jose; Hanson Hunter Co., Scotia; Taft Electric Co., Taft.

Colorado: R. E. Shinn Co., Denver; Dixon-Rothrock, Inc., Ft. Morgan; Johnson & Goveau, Rocky Ford.

Connecticut: George B. Clark Co., Bridgeport; Edward Rousseau, Jewett City; Wm. T. Woolley & Sons, Meriden; I. Smolen, New Haven; Stuart Crafts, Southington; Martineau-Bacon Co., Willimantic.

Delaware: Hearne & Co., Delmar; Washington, D. C.: Shafers, Hugo Worch, K. C. Sexton, Homer L. Kett Co. and Arthur Jordan Piano Co.

Illinois: Williams Bros. Dept. Store, Antioch; Jos. F. Budnik, Viking Electric Shop, Holland's Jewelry & Radio Store, Chicago; Fleming Furniture Store, Fairfield; Gidcomb Furniture Co. and Seton Furniture Co., Harrisburg; Wabash Furniture Co., Mt. Carmel; Olendorf's Music House, Mt. Carmel; Cohen Furniture Co., Pekin; Griffith Chevrolet Co., Pleasant Hill; T. M. Van Deroo, South Holland.

Indiana: Henry Heck & Co., Camleton; J. A. Applewhite, Ewing; O. W. Deer & Son, Franklin; Woerter Electric Shop, Huntingburg; Grunow Sales, Indianapolis; Theo. J. Welp, J. Welp, Jasper; H. J. Schrader & Co., Clinton, Elwood, Kokomo, Marion, Muncie, Tipton, and Warsaw; Guarantee Tire & Rubber Co., Newcastles; Electric Shop, Oakland City; Harrell & Parker, Petersburg; Gibson Electric Co., and Fleener Radio Shop, Princeton; Radio & Electric Shop, Rockport; Indiana Stove & Furniture Co., Terre Haute.

Iowa: J. V. Dickerson, Council Bluffs; Kansas: F. H. Gibbs, Barnard; R. D. Bradstreet, Dighton; A. R. Anderson, Falun; Herndon Equity, Herndon; E. D. Lavine, Lebanon; Bahman Chevrolet Co., Meade; Scherzinger Merc., Ransom; T. S. Martin & Co., Utica; Fred Feyerabend, Woodbine.

Kentucky: Modern Furniture Co., Bardonia; Beaver Dam Coal Co., Beaver Dam; Central City Lumber Co., Central City; Kincaid Bros. Hdwe. Co., Corbin; Louis Marx Bros., Covington; Whitford & Sons, Earlinton; Porter Leach Hdwe. Co., Hartford; B. C. Trent Lawrenceburg; O. K. Radio Shoppe, Lebanon; C. F. Brower, Lexington; London Hdwe. Co., London; Pinnacle Motor Co., Middlesboro; Chenault & Orear, Mt. Sterling; Hart Lockwood Co., Paducah; F. N. Gardner Jr. Furniture Co., Paducah; Princeton Lumber Co., Princeton; Barber Hdwe. Co., Springfield; Pence & Hill, Stanford; Stearns Coal &

'The Lure of the Sea'



Frigidaire Sales Corp. of Buffalo capitalized on the Frigidaire-sponsored Seth Parker radio program when it was invited by the Niagara & Eastern Power Co. to create a display for a window of the Electric Building.

Lumber Co., Stearns. Louisiana: Maurin & Wilton, LaPlace; F. J. Dauterive Furniture Co., New Iberia; D. H. Holmes Co., Ltd., and Galles Furniture Co., New Orleans; Daly Motor Co., Opelousas; Ayo's Drug Store, Raceland.

Maine: Everett J. Marshall, Bethel; Moore & Winslow, Jackman Station; Charles H. Mathews, Kennebunk; Francis H. Hanson, Newport; Arthur E. Draggett, North Anson; Graves Radio Service, Rumford; Atkinson Furniture Co., Saco; Bailey's Music Store, Wilton.

Massachusetts: A. R. Tinkham, Bridgewater; Cabot Furniture Co., Chicopee; J. H. Burke Co., Haverhill; James E. Kelly, Lee; J. H. Kurke Co., Marlboro; George E. Carnwell, Wareham.

Maryland: Hecht Bros., Baltimore. Michigan: A. Drilling, Baldwin; Bennett Electric Co., Big Rapids; Currier Furniture Co., Cadillac; J. L. Hudson Co. and Crowley-Milner Co., Detroit; Curtis Hdwe., Erdmore; Geo. C. Lutz, Fenton; East Side Radio Shop, Flint; H. J. Lampen, Hamilton; De Weerd & Van Dyke, Hudsonville; H. S. Beneway, Middleville; J. H. Malbin & Sons, Mt. Clemens; Palen & Sons, New Buffalo; Sperry's Dept. Store, Port Huron; Schultz & Fuller, Saginaw; Heinger Implement Co., Saline; A. J. Rankin, Shelby; Jackson & Spillane, Swartz Creek.

Mississippi: Johnson Drug Store, Bay Springs; J. C. Clower Furniture Co., Gulfport; Woodruff Furniture Stores, Hattiesburg; A. Gressett Music House, Jackson; Rice-Pappenheimer Furniture Co., Meridian; Lott Furniture Co., Philadelphia.

Missouri: Geiger Plumbing & Electric Shop, Boonville; Sanders Electric Co., St. Louis.

Nebraska: J. R. Ward, Omaha. New Jersey: J. Rosenfeld, Burlington; John Okulicz, Camden; E. G. Buchanan, Flemington; General Supply Co., Hackensack; Arthur Witherow, Hornell; J. Rosenfeld, Mt. Holly; H. M. Ash Co., Paterson; City Center Garage and Norman Grosz, Pitman; C. U. Spangler, Rossville; Stoll Blank Book & Stationery Co., Trenton.

New York: E. G. May, Albany; Howard Electric Co., Bronx; Forest Sales & Service, Edward Holmberg, and N. C. Johnson, Brooklyn; Grad & Johnson and Kensington Elec. Appliance Co., Buffalo; W. E. Kidd, Canajoharie; C. M. Aldrich, Castile; Earl S. Benedict, Cobleskill; John W. Shields, Downsville; Bates & Carmody, Glen Falls; Ross E. Brown, Holland; Hyde Park Motor Co., Hyde Park; Chas. L. Wheelock, Ilion; Queens Elec. Ships, Inc., Jamaica, L. I.; Gordon P. Smith, Malone; W. V. Duryea, Mattituck, L. I.; Walter J. Boyle, Mt. Vernon; W. Auterith & Son, Newport; L. M. Greenberg and Clarence L. Law, New York City;

Kingston-Burns & McDonald, Ogdenburg; Bragg Bros., Pottsville; Peter M. Doran, Seneca Falls; Associated Radio Co., Syracuse; James Eseline, Three Mile Bay; Frank Kaiser's Radio Studio, Tonawanda; Hoosick Elec. Co., Troy; Lawrence A. Danielsen, Yonkers.

Ohio: C. H. Yeager Co., Akron; Leader Outfitting Co., Gerhard Warms, and I. L. Greenwald, Inc., Cincinnati; C. D. Ayer, Forestville; Elliott Furniture Co., Steubenville; Thad Moore, Toledo.

Oklahoma: Elden Rea, Ringwood. Pennsylvania: F. D. Mickey Electric Co., Chambersburg; William H. Dfardorf, Chambersburg; Francis Zachere, Clarion; Bechtel, Collegeville; H. R. Gehman, Doylestown; Troutman Co., DuBois; Euwer Furniture Co., Jeannette; Lancaster Maytag Co., Lancaster; H. J. Heiser, Mahoney City; Knutz Electric Co., Millvale; Phil Strauss Furniture Co., Nanticoke; W. H. Pearce, Philadelphia; J. Schlotterer, Phoenixville; Hohn Furniture Co., Kaufmans Department Store, Fallers Bros. and York Supply Co., Pittsburgh; Kepner & Romich, Pottstown; Robert Deppen, Reading; C. U. Spangler, Rossville; Fallers Bros., Turtle Creek; Peoples Furniture Co., Uniontown; Huffman Furniture & Undertaking Co., Waynesburg; C. Foster Hick, Inc., and Wilkes Barre Hdwe. & Stove Co., Wilkes Barre; C. A. Clark, Wilkesburg; Neyhart Hdwe. Co., Williamsport; Fallers Brothers, Wilmerding.

Rhode Island: E. J. Desormeaux, Central Falls; Edgewood Plumbing & Heating Co., Cranston; Peltier Brothers, Natick; John Le Pore, Pawtucket; Diamond Oil Burner Co., Providence.

South Dakota: J. M. Stiver Hdwe. Co., Huron.

Texas: Hills-Robinson Hdwe. Co., Arkansas Pass; The Fair Store, Ft. Worth; McCann Sales Co., San Antonio; Victoria Plumbing Co., Victoria.

Vermont: Manchester Plumbing & Heating Co., Manchester. Wisconsin: Gasser Brothers, Boscobel; Goodman Department Store, Goodman; Westernbergers, Hartford; August Roeseler, Hustisford; United Radio Co., Milwaukee; John P. Locher, Newburg; Langer-Gerber Auto Co., Sheboygan Falls; Standard Mercantile Co., Tomahawk; Rohde & Son, Union Grove; Harris & Green, Waukesha; Conoley Radio Co., Waupun; Stark & Schill, Wisconsin Rapids.

Georgia Power Co. Has 4,325 New Customers

ATLANTA—During the period Sept. 1 through Feb. 20, the Georgia Power Co. has obtained contracts for 4,325 new and reconnected customers.

Make Money with Copeland

Copeland Household Refrigerators for 1934 provide every feature to make them easy to sell.

Porcelain models 5.3, 6.5, and 7.5 cu. ft. net storage capacity. Lacquer finish models in 4, 5.3, 6.5, and 7.5 cu. ft. net storage. Semi-concealed hardware; plenty of ice-making capacity; convenient shelves. All condensing units bottom-mounted making it easy to reach even bottom shelf without bending.

This is the time to investigate. Distributors who can qualify for Copeland franchises have everything in their favor.

Attractive merchandise
Popular prices and generous discounts
Exclusive territory

21 Copeland Commercial Condensing Units add to the opportunities afforded aggressive distributors.

Write, wire or phone today if you are interested in making money this year.

COPELAND REFRIGERATION CORP., Mt. Clemens, Mich.

Copeland

DEPENDABLE REFRIGERATION

Salesmen Seek Place In G-E 'Hall of Fame'

CLEVELAND—The annual spring sales campaign of the General Electric specialty appliance sales department, which this year takes the form of an "All-Star" discovery drive, opened March 19 in the South and will begin April 2 in the North. It will run for eight weeks, it has been announced by Jean DeJen, campaign director for the department.

At the close of the "Discovery Drive" upwards of 40 men, outstanding men representing every branch of the General Electric home appliance selling organization, will be selected to participate in the G-E 1934 "All Star Review." This review will be presented at Nela Park in Cleveland and will be a feature of the annual summer convention, Camp Refrigeration VIII.

"All-Star" Review

The stars who participate in the review and also in a victory banquet will present to the convention the sales methods and practices which enabled them to attain stardom. These practices then will be carefully analyzed and later applied in the field.

At the conclusion of the "All Star Discovery Drive" each distributor in the United States will hold a "Star Review" in his city at which time star salesmen will be presented. From these stars will be selected the men who will form the cast for the review in Cleveland. This cast will be composed of the following:

Two retail sales managers, two retail salesmen, two retail supervisors, two wholesale sales managers, one water cooler specialist, two district managers, two commercial managers, two commercial salesmen, two dealers, two apartment house sales managers, two utility merchandise managers, two sales promotion managers, and 11 distributors.

11 Groups of Distributors

For the purpose of the "Discovery Drive" the distributors have been divided into 11 groups, four in the South and seven in the North. The leader from each group will be selected as a star and will be presented at the convention. The prime factor in determining the winners will be the accomplishment of the best overall sales jobs on all appliances.

Salesmen will be divided into three groups, those employed by the distributor, utility, and dealer. The qualified leaders in each group will be selected to participate in the "Star Review" to be held in his distributorship.

Each salesman, sales manager, dealer, utility merchandise manager, and distributor selected as a star to participate either in the preliminary review or the later review in Cleveland, will receive the General Electric award for achievement, a gold watch.

In addition, each of these stars will be given national recognition in the G-E Gallery of Stars. This gallery, which will be established in the Hall of Fame of the new General Electric Institute, will be composed of photographs of the leading salesmen and others selected as stars throughout the United States. The Hall of Fame will be under the supervision of Paul H. Dow, director of the institute.

Department Store Uses Window Display Plan of G-E

CLEVELAND—A number of department stores are displaying General Electric refrigerators on the Stensgaard Itinerant Display plan, it has been announced by the Specialty Appliance Sales department of General Electric Co.

The plan provides for a pre-arranged and scheduled reservation for one full week's showing of an accepted G-E kitchen appliance window display designed to meet the rigid merchandising requirements of the large department stores.

After distributors designate the department store in which they would like to have the display shown, field representatives contact the store and obtain approval for a scheduled week. A service fee of \$25 for a full week's showing is charged the distributor.

Gov. Herring Speaks at Iowa Dealer Meeting

DES MOINES, Iowa—The 1934 Leonard refrigeration season is officially under way in Iowa, Governor Clyde L. Herring and Mayor Dwight N. Lewis of Des Moines having launched it March 14 when "Schneiderhahn Day" was celebrated here.

Hotel Fort Des Moines was headquarters for the event. Housewives in the city were invited to the hotel to see the new Leonard line, and 504 dealers of A. A. Schneiderhahn Co., Leonard distributor, were brought into Des Moines for the occasion, which lasted through March 15.

Ossie Solem, coach at the University of Iowa, and R. M. Evans, Iowa corn and hog chairman, were also present to assist the governor and mayor.

Supplementing use of newspapers and printed invitations to reach the general public, A. A. Schneiderhahn sent 1,750 telegrams to refrigerator prospects in Des Moines.

Annual Schneiderhahn convention was held March 15 in the hotel ballroom. Godfrey Strelinger, Leonard sales manager, and Sam C. Mitchell, advertising manager, went to Des Moines from Detroit to represent Leonard with Myles Ewing, district sales manager for that section of the country. C. C. Armstrong, head of Refrigeration Discount Corp., Leonard's financing organization, Detroit, was also on the program.

Kelvinator Dealers Fete Raymond Rosen

PHILADELPHIA—Fifty Kelvinator dealers from the Philadelphia territory recently held a testimonial dinner for Raymond Rosen, distributor here, and his associate, Al Slap, at which they were presented with a plaque signifying the dealers' appreciation of cooperation given by the distributorship during 1933.

Seeger Catalog Features New Household Cabinets

ST. PAUL—Seeger Refrigerator Co. has just released its 1934 catalogs, featuring the new styled household electric refrigerator cabinets, and its new porcelain butcher coolers.

The catalog is handsomely printed on rough-grain paper and offers complete specifications and illustrations of all Seeger equipment.

McCORD REFRIGERATION PRODUCTS

COMMERCIAL EVAPORATORS

DOMESTIC EVAPORATORS

CONDENSERS

METLFLEX ICE TRAYS

SPIRAL FINNED TUBING

SPIRAL COPPER FINNED IRON

STEEL OR COPPER PIPE

McCORD RADIATOR & MFG. CO. DETROIT, MICH.

COMMERCIAL REFRIGERATION

Kold-Hold Units Provide 16-Hour Holdover in New Ice Cream Cabinets

(Concluded from Page 1, Column 2) same type that has been widely applied in refrigerated trucks during the past year.

Tests conducted at the Kold-Hold Mfg. Co.'s engineering laboratory showed that temperatures satisfactory for ice cream work were maintained in the cabinets for 16 hours without the operation of the condensing unit. Tests were conducted in a room kept at 100° F., with calculations made from thermo-couplings and potentiometer readings.

In the application to the new Consolidated cabinets, the eutectic solution is contained in jackets built around the sleeves in the ice cream cabinet. Copper tubing carrying refrigerant cools the solution to a flint-like hardness and the condensing unit is cut out by a thermostatic control.

Operation of the cabinet at night when cheaper power current rates are available can be made possible by the use of a starting clock or time-stat.

The cabinets are insulated with 3 inches of corkboard in the top, 3 to

4 inches in the sides and ends and 4 inches in the bottom. All joints are broken, moisture-proof insulating paper being placed between each thickness of corkboard. Reynolds master paper aluminum foil is placed between the exterior metal sides and the corkboard.

Tops are stainless metal, each opening having a stamped, raised bead ring in opening to prevent moisture running down into it. A heavy steel plate reinforces the stainless metal top.

Side and end panels of the cabinet are steel, finished in black baked enamel or white lacquer, and treated on the inner surface and edges with a rust-resistant primer.

Service panels provide access to the valve compartment for easy installation of the copper tubing. Ducts are placed between the thicknesses of the corkboard.

The Kold-Hold cooling units are heavy copper-bearing steel, welded and coated with a special rust-resistant primer.

Specifications on Kold-Hold Cabinets

Hardening or Storage Cabinets		Dispensing Cabinets Standard Speed-E-Serv		Capacity		Dimensions		
Model No.	Comp. Required Hp.	Model No.	Comp. Required Hp.	Ice Cream Gals.	Cubic Feet	Length	Width	Height
4 H 30	1/2	SD 42	E 410	1/4	10	2.9	31	19
4 H 40	1/2	SD 44	E 420	1/2	20	5.8	32	30 1/2
4 H 60	1/2	SD 46	E 430	3/4	30	8.7	41 1/2	30 1/2
4 H 80	1	SD 48	E 440	1	40	11.6	53 1/2	30 1/2
4 H 100	1 1/2	SD 412	E 460	1 1/2	60	17.4	76 1/2	30 1/2
4 H 120	1 1/2	SD 416	E 480	2	80	23.2	100 1/2	30 1/2
		SD 420	E 4100	1	100	29.0	123 1/2	30 1/2
		SD 424	E 4120	1	120	34.8	147 1/2	30 1/2

Predict Stable Price on Solid CO₂ This Year

WYANDOTTE, Mich.—Price fluctuations in solid carbon dioxide for commercial purposes will be at a minimum during 1934, declares Lewis C. Chamberlin, manager of the solid carbon dioxide division of the Michigan Alkali Co.

The stability of future prices, Mr. Chamberlin pointed out, arises from two causes: (1) a better understanding of the market and its requirements by dry ice producers who recognize that if the expansion of the industry is to continue as in the past, dry ice prices must not fluctuate materially, and (2) the stabilization of productive conditions which take care of a fluctuating demand.

Recent wage increases at the dry ice plant of the Michigan Alkali Co. have amounted to from 10 to 15 per cent, with the result labor costs may be considered stabilized for some time to come, Mr. Chamberlin declared.

New equipment added to the Michigan Alkali plant has increased the capacity from 150 to 225 tons daily. This improvement in the production set-up, said Mr. Chamberlin, will enable the company to take care of peak demands for dry ice and will thereby exert a stabilizing influence on prices.

Slide Films to Educate G-E Salesmen

CLEVELAND—Slide films will be used to educate General Electric commercial refrigeration salesmen on the operation and features of the new Russ-G-E beverage cooling system.

"KING ZEERO"

Individual Temperature Control Valves should be used in all installations of two or more coils.

Send for new bulletin showing hookups and operation.

The King Zeero Company
3118-20 Clybourn Ave. Chicago, Ill.

VIRGINIA SMELTING Company
WEST NORFOLK, VIRGINIA
75 BEAVER ST., N.Y. - 131 STATE ST., BOSTON

Extra Dry ESOTOO
LIQUID SULPHUR DIOXIDE
V-METH-L
METHYL CHLORIDE

Caswell Installs 4 Russ Beer Coolers

DETROIT—Caswell, Inc., G-E distributors for Michigan, has made four installations of the new G-E-Russ beer cooler and dispenser, announced only a few months ago.

At the Old Depot beer garden in Saginaw is installed a 3-tap beer dispenser and cooler, with a pre-cooling box and a food storage refrigerator. Conditioned-air evaporators are used in the pre-cooler and storage cabinet. A 1 1/2-hp. condensing unit handles the job. Also installed is an ice maker with a 1/5-hp. condensing unit.

George B. Wilhelm's Lotus Gardens Cafe in Saginaw has a 3-tap dispenser with a bottle storage compartment. A pre-cooler is equipped with a fin coil. A 1 1/2-hp. compressor is installed for this job.

A 2-tap G-E-Russ beer dispenser has been installed to form part of an elaborate bar unit at the Hotel Harrington in Port Huron. A conditioned-air evaporator for a pre-cooler and a 1/2-hp. condensing unit complete the installation.

De Meulemeester's restaurant in Detroit has been equipped with a 2-tap dispenser hooked up to a 1/2-hp. condensing unit.

Water Cooler Sales In Boston Increase

BOSTON—The water cooler division of the Boston sales branch of Kelvinator Corp. has made sales amounting to \$80,000 since March of 1933, according to Harry Troutwine, manager of the Boston branch. W. H. Browne is manager of the Boston water cooler division.

One of the largest sales made was to the Blue Hill Spring Water Co., local water distributor, which contracted for 353 coolers. This same firm is said to be contracting for more coolers.

Slowe to Head Sales at Pittsburgh Branch

EVANSVILLE, Ind.—J. W. Slowe, who was formerly connected with the Servel national organization with headquarters in Washington, D. C., has been appointed commercial sales manager for Servel's Pittsburgh branch, it has been announced by F. E. Sellman, vice president in charge of sales, Servel Sales, Inc.

York Freon Unit Sold To Brooklyn Market

BROOKLYN, N. Y.—One of the small-machine refrigerating units, employing Freon as the refrigerant, introduced by York Ice Machinery Corp. last year, has been installed in the new market operated by Harry J. Kamps, former president of the South Brooklyn branch of the Retail Meat Dealers Association.

Meats and other products in Mr. Kamps' new market are displayed and preserved in an 8x10 1/2 ft. "refrigerated display cooler." The cooler is fitted with windows to give customers a look at the products.

The condensing unit has been mounted on top of the refrigerator. Placing the unit on the top of the cabinet helps to call the customer's attention to the modern type of equipment with which the market is equipped, declares Mr. Kamps.

14 Dealers Get G-E Air Conditioning Franchises

NEW YORK CITY—Fourteen additional dealers for G-E air-conditioning equipment and oil and gas furnaces have been announced by the General Electric air-conditioning department.

Included among the new dealers are: A. Boyd Thorn and Sons, Clearfield, Pa.; Keystone Appliances, Inc., Harrisburg, Pa.; R. Allison Miller, Huntingdon, Pa.; Musser Hardware Co., Mifflinburg, Pa.; W. Brown Elliott, Lock Haven, Pa.; O'Bannon Brothers, Inc., Little Rock, Ark.; H. E. Longley, Wilmington, N. C.; L. W. Driscoll, Inc., Charlotte, N. C.; R. W. Hager, Terre Haute, Ind.; Eastern Tractor and Equipment Co., Portland, Me.; W. J. Stotts, Paris, Ill.; Swanburg Construction Co., Manchester, N. H.; B. K. Sweeney, Inc., Denver, Colo.; and H. H. Blish, Des Moines, Iowa.

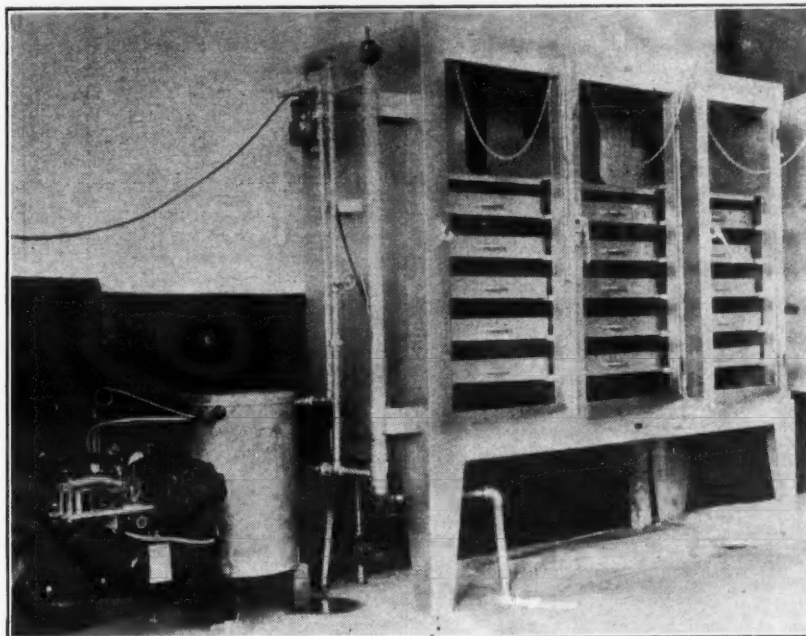
Greensboro Restaurant Has G-E Comfort Cooling

CHARLOTTE, N. C.—Thacker's new restaurant in Greensboro which opened Feb. 1 is completely equipped with General Electric commercial refrigeration and comfort-cooling equipment.

The sale was made by Doug Goff, commercial sales manager of L. W. Driscoll, Inc., local distributor for G-E refrigeration products.

Other commercial orders recently secured by Goff include comfort-cooling and refrigeration equipment for the coffee shop of the Sir Walter hotel at Raleigh and comfort cooling for the Washington Duke Hotel coffee shop at Durham.

A Novel Use for a Commercial Unit



A Frigidaire condensing unit helps to maintain constant temperatures in the cement testing equipment with which it is pictured here.

Brunswick Sets Up Bar Tender Agency

NEW YORK CITY—The New York branch of Brunswick-Balke-Collender Co. here has set up an employment bureau at which bar attendants can register their qualifications as a means of putting experienced drink servers at the disposal of hotels, clubs, and restaurants.

The same type of service bureau will be inaugurated at the company's branch offices in Baltimore, Boston, Newark, and Philadelphia, Brunswick-Balke officials have announced.

Ryan, G-E Lighting Engineer, Dies

SCHENECTADY, N. Y.—Walter D'Arcy Ryan, well-known General Electric illuminating engineer, generally regarded as the man who first made artificial illumination both a science and an art, died at his home here March 14, of heart trouble. He was first stricken last summer.

LOUISVILLE, Ky.—Installation of commercial electric refrigeration systems to maintain constant temperature and humidity conditions for testing cement has been made in cement plants in Kentucky and Indiana by the William H. Day Co., Inc.

As weather conditions under which cement is applied are a vital factor in its preparation, it is necessary for the cement manufacturer to know just what his product will do under varying climatic conditions.

The Frigidaire installations made for this purpose are in the laboratory of the Kosmos Cement Co. at Kosmosdale, Ky., and in the plant of the Louisville Cement Co. at Speeds, Ind.

The installations consist of a specially designed cabinet of steel with drawers providing 75 numbered compartments in which test briquets are placed. A thermostatically controlled electric water heater and a Frigidaire compressor with a tank provide a supply of hot and cold water. By means of a Powers regulator, the hot and cold water in proper amounts is introduced into the cabinet through three sprays to effect proper control of temperature and humidity.



ORCHIDS TO YOU...

Whenever neighbors talk about their Refrigerators, Oil Burners or Air Conditioners it's "An Orchid to You" or, it isn't—depending entirely on the care and conscientious design put into the product... Good reputations are built in. And, because the motor is a most important factor in continuous and satisfactory performance, manufacturers and designers have for years availed themselves of Century Specialized Engineering experience... Up to 600 Horse Power.

CENTURY ELECTRIC COMPANY
1806 Pine Street St. Louis, Mo.
Offices and Stock Points in Principal Cities



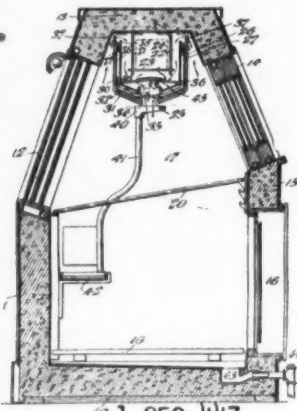
Century
MOTORS

PATENTS

Issued March 13, 1934

1,950,447. REFRIGERATOR CASE. Roland E. Frederick, Philadelphia, Pa., assignor of one-half to William E. Hill, Glenside, Pa. Application March 9, 1931. Serial No. 521,115. 9 Claims. (Cl. 62-89.6).

1. In a refrigerating case, a cooling unit, a baffle in spaced relation to said case and

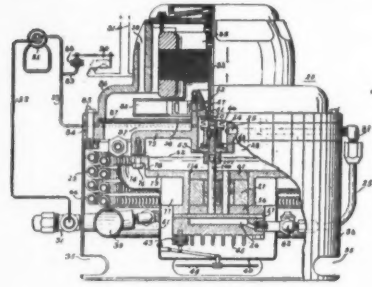


1,950,447

to said cooling unit, the case and baffle defining a warm air inlet, said baffle having a passage leading from a point beside the cooling unit to a point substantially beneath the cooling unit for bypassing warm air into the stream emerging from the cooling unit.

1,950,510. REFRIGERATING APPARATUS. Ralph K. Miller, Dayton, Ohio, assignor to Frigidaire Corp., Dayton, Ohio, a corporation of Delaware. Application Oct. 31, 1928. Serial No. 316,173. Renewed April 19, 1933. 20 Claims. (Cl. 62-115.)

1. In a refrigerating apparatus, a closed circuit which includes a rotary gear compressor through which the refrigerant and



1,950,510

the lubricant are circulated, a condenser through which the refrigerant is circulated by said compressor, means for circulating a cooling fluid medium in contact with said compressor and said condenser, and thermodynamic means responsive to the temperature of said compressor for shielding the condenser from the circulation of the cooling fluid medium in contact with said compressor.

1,950,551. REFRIGERATING APPARATUS. John A. Grier, New York, N. Y., assignor to Frigidaire Corp., Dayton, Ohio, a corporation of Ohio. Application Dec. 30, 1933. Serial No. 505,494. 4 Claims. (Cl. 62-115.)

1. In a refrigerating apparatus, the combination of a motor driven two-stage compressor, a flat inclined condenser connected to the discharge part of the high pressure stage of the compressor, an inter-cooler integral with the condenser for the compressor, and a cooling fan mounted above the combined condenser and inter-cooler for providing air circulation.

1,950,539. REFRIGERATOR TRUCK. Leonel A. De More, Oak Park, Ill., assignor, by mesne assignments, to The Yale & Towne Mfg. Co., Stamford, Conn., a corporation of Connecticut. Application March 18, 1932. Serial No. 599,667. 8 Claims. (Cl. 62-13.)

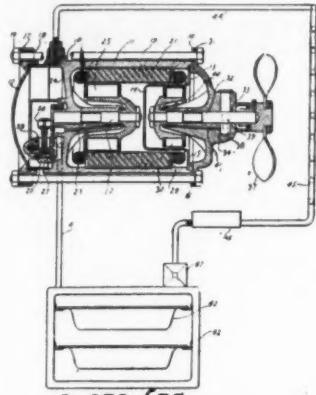
1. In a truck of the class described, a truck body, a U-shaped compartment in said body, a plurality of covers at the top of said compartment providing the only means of access thereto, an exterior wall disposed about said compartment, said wall extending above the level of said covers, and a centrally disposed platform extending longitudinally of said body, said platform being disposed above the bottom level of said compartment.

1,950,623. METHOD OF AND MACHINE FOR PRODUCING SPIRAL FIN TUBING. Charles W. Owston, Detroit, Mich., assignor to McCord Radiator & Mfg. Co., Detroit, Mich., a corporation of Maine. Application March 2, 1931. Serial No. 519,370. 22 Claims. (Cl. 153-64.5.)

1. In a machine for producing spiral fin tubing, a revolvable head having an axially disposed passage through which a tube may be fed, said head having an annular flange about said passage and forming a support for a supply of fin strip material in reel or coil form, said flange having a slot in one part of its circumference whereby the fin strip material may be drawn from one circumference of the coil through the slot and be presented to the tube for spiral winding thereon.

1,950,638. REFRIGERATING APPARATUS. Matson C. Terry, Mansfield, Ohio, assignor to Westinghouse Electric & Mfg. Co., a corporation of Pennsylvania. Application Nov. 1, 1929. Serial No. 404,061. 4 Claims. (Cl. 62-115.)

1. Refrigerating apparatus comprising a compressor, a condenser and an evaporator, operative interconnections between said parts, means for circulating air over the condenser, a motor, said motor comprising a single stator and two rotors, one of said rotors driving the compressor the other rotor driving the air circulating



1,950,638

means, and a sealed partition between said rotors.

1,950,703. REFRIGERATION. Albert R. Thomas and Robert S. Taylor, New York, N. Y., assignors to Electrolux Servel Corp., New York, N. Y., a corporation of Delaware. Application Aug. 20, 1930. Serial No. 476,498. 23 Claims. (Cl. 62-119.5.)

12. A generator comprising chambers for strong and weak liquid, means for heating said chambers, one of said chambers having a vapor space insulated by liquid contained in the other of said chambers from the direct action of heat.

1,950,710. REFRIGERATOR LEG. Llewellyn Samuel Woodhull, Detroit, Mich., assignor to Briggs Mfg. Co., Detroit, Mich., a corporation of Michigan. Application June 20, 1932. Serial No. 618,352. 6 Claims. (Cl. 45-48.)

1. The combination with a panel having a pair of slots and a threaded aperture formed therein and arranged in triangular relation in the same plane, of a leg member having tongues engageable in said slots and an aperture adapted to register with said threaded aperture, and detachable means engaging said apertures for securing the leg member to said panel.

1,950,714. CONTAINER AND COOLER. Ernest Joseph D'Aoust, Windsor, Ontario, Canada, and Herbert Lawrence Dickens, Detroit, Mich. Application July 28, 1932. Serial No. 625,500. 1 Claim. (Cl. 62-91.5.)

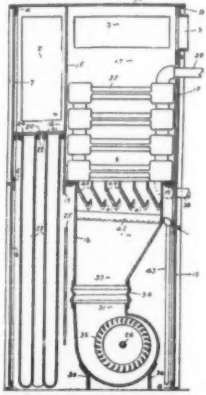
A container and cooler comprising a container having a top and bottom, and an extension wall extending beyond the bottom, and having a groove therein, an outer bottom having a flange engaging with the groove of the extension wall and enclosing the same and forming a refrigerant chamber, a filling inlet leading through the top of the container and having a closure and an outlet having a closure leading into the container adjacent to the bottom thereof.

1,950,781. PORTABLE REFRIGERATION DEVICE. Bruce Burns, Los Angeles, Calif., assignor to Patco, Inc., Los Angeles, Calif., a corporation of California. Application July 6, 1932. Serial No. 621,059. 8 Claims. (Cl. 62-120.)

1. A portable refrigerating unit comprising: an open top freezing shell; a removable cover adapted to close the opening in the top of said shell; walls forming an expansion chamber partially surrounding said freezing shell; walls forming an absorber chamber situated below said expansion chamber; walls forming a cooling chamber surrounding said absorber chamber; a conduit connecting said absorber chamber with the top of said expansion chamber; a valve in said conduit; a volatile refrigerant boiling at a temperature below the atmospheric boiling point of water, said refrigerant being carried in the space including said expansion chamber, said absorber chamber, and said conduit; an absorbing medium carried in said absorber chamber; means by which either hot or cold water can be circulated through said cooling chamber; and a single supporting structure in which all of the previously recited elements are supported.

1,950,807. AIR CONDITIONING APPARATUS. Clark T. Morse and Edward L. Hogan, Detroit, Mich., assignors to American Blower Corp., Detroit, Mich., a corporation of Delaware. Application Aug. 7, 1931. Serial No. 555,778. 16 Claims. (Cl. 257-9.)

1. In an air conditioning apparatus, a casing having an inlet chamber and an outlet chamber, said inlet chamber having



1,950,807

a floor with air holes therein, filter means in said holes, and means in the casing supported independent of the casing to cause a current of air from the inlet chamber through the filter means to the outlet chamber.

1,950,832. APPARATUS FOR RECORDING THE PERIODS OF OPERATION OF AN ELECTRICAL INSTALLATION. Gustav Winter, Le Locle, Switzerland, assignor to the firm of Fabriques des Montres Zenith Successeur de Fabriques des Montres Zenith Georges Favre-Jacot & Cie, Le Locle, Switzerland. Application April 26, 1932. Serial No. 607,640. In Germany May 4, 1931. 2 Claims. (Cl. 234-36.5.)

1. Apparatus for recording the rest or operating periods of an electrical installation, comprising a shaft, time-operated means for rotating said shaft, a chart carried by said shaft, a solenoid disposed on its side beneath said chart, a spring-

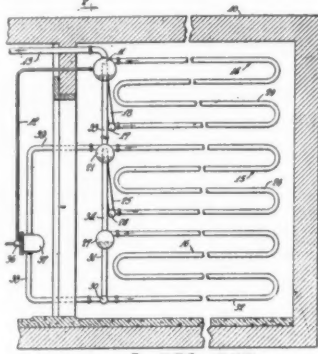
biased arcuate lever attached at one end to the armature of said solenoid and adapted to be moved thereby, the lever extending around said shaft to a position substantially diametrically opposed to said solenoid, a pivot pin on which said lever is mounted, and a stylus consisting of two arms, the first being pivoted to said pin and the second being hinged to the first arm on a pivot pin substantially perpendicular to the first-mentioned pivot pin, so that the point of said stylus swingably overlies the chart.

1,950,905. REFRIGERATING UNIT. Harry Rubin, Cleveland, Ohio, assignor of one-half to George J. Matowitz, Cleveland, Ohio. Application May 6, 1932. Serial No. 609,655. 3 Claims. (Cl. 62-94.)

1. In a portable refrigerating apparatus of the character described, the combination of a suitable outer casing, of an inner casing, of an insulating element within the outer casing and surrounding the inner casing, an endothermic type of refrigerant in the inner casing, noninsulated compartments in the inner casing and immersed in the endothermic refrigerant, a removable tray in each of the said non-insulated compartments, an inlet having a small area in the casing and a closure for the inlet.

1,951,007. EVAPORATOR FOR REFRIGERATING SYSTEMS. Walter E. Beline, Carbondale, Pa., assignor to Carbondale Machine Co., Carbondale, Pa., a corporation of Pennsylvania. Application June 27, 1932. Serial No. 619,434. 8 Claims. (Cl. 62-126.)

4. An evaporator of the flooded type for a refrigerating system, including a plurality of superposed circulatory units, each



1,951,007

including a horizontally extending drum and a conduit extending downwardly from the lower portion of the drum and then upwardly to the upper portion of the drum, whereby liquid refrigerant is circulated through said conduit, an inlet connection for the highest drum, and pipe connections between the drums, whereby the liquid is fed successively downwardly from one drum to the next.

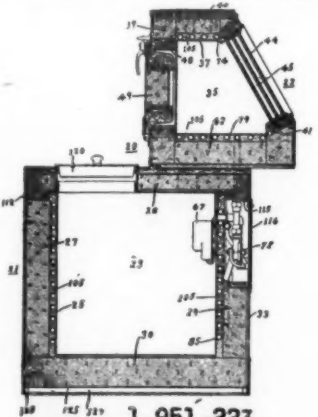
1,951,071. REFRIGERATOR TRAY. Lester E. Stipe, Portland, Ore. Application May 9, 1933. Serial No. 670,165. 1 Claim. (Cl. 62-108.5.)

In combination a metallic ice tray for electric refrigerators and a liner-container for said tray comprising a single, substantially rectangular blank of wax treated paper having integral tabs at opposite end edges thereof; said blank being foldable on longitudinal and transverse fold lines to provide a bottom, side and end walls, said blank being also foldable at the corners thereof on right angularly related fold lines forming continuations of the first named fold lines extending inwardly from the corners of the blank to the angles between the second named fold lines to provide at the corners substantially triangular folds extending inwardly of the liner-container and foldable against the inner sides of the side walls of the liner-container and adhering to said side walls due to the inherent adhesiveness of the wax to thereby retain the folded blank in shape; said tabs being also foldable relative to the blank, and also foldable upon themselves on transverse fold lines to provide two-ply handles for the liner-container integral with the end walls of the container, said liner-container being shaped and dimensioned to fit within said refrigerator ice tray with said handles overlying and resting upon the rim of said tray.

1,951,074. REFRIGERATOR. Glenn A. Warren and William B. Simpson, Jr., Bakersfield, Calif., assignors of one-third to Edward R. Williams, Corcoran, Calif. Application May 5, 1931. Serial No. 535,200. 2 Claims. (Cl. 62-91.5.)

1. A refrigerating device for installation in a refrigerator or the like comprising, an insulated dry-ice container, a refrigerating chamber composed of an inner and an outer shell forming therebetween a passage, a conduit communicating the interior of the dry-ice container and this passage for circulating therein gas generated in the dry-ice container by the dry-ice, said conduit being introduced into the said passage at the upper end thereof, and pressure operated gas release means communicating through the outer shell with the passage for releasing gas from the passage to the atmosphere.

1,951,223. REFRIGERATING APPARATUS. Bernard J. Vandoren and Jesse G.



1,951,223

King, Dayton, Ohio, assignors to Frigidaire Corp., Dayton, Ohio, a corporation of Delaware. Application July 31, 1930. Serial No. 471,930. 4 Claims. (Cl. 62-89.5.)

1. A refrigerator cabinet comprising in combination a display unit and a storage unit, insulated walls for said units, lining members for said units, a coiled liquid refrigerant evaporator disposed between said insulated walls and said lining members and hermetically sealed from said insulation, said evaporator being in engagement with opposite sides of each of said lining members, and a refrigerant circulating element for supplying refrigerant to said evaporator, said refrigerant first being expanded on opposite sides of one of said lining members and then the other to thus maintain different temperatures in said units.

1,951,230. REFRIGERATING APPARATUS. Donald F. Alexander, Dayton, Ohio, assignor to Frigidaire Corp., Dayton, Ohio, a corporation of Delaware. Application Sept. 30, 1931. Serial No. 565,370. Renewed April 19, 1933. 16 Claims. (Cl. 62-4.)

1. Refrigerating apparatus including a sealed unit containing a compressor for compressing the refrigerant and a single phase induction motor for driving said compressor, a condensing means situated outside of said sealed unit for condensing the refrigerant compressed in said compressor, a fan for blowing air over said condensing means, a single phase fan motor having a main winding, and means for supplying said main winding of said fan motor with electric energy induced in said single phase induction motor.

1,951,252. BEER PIPE CIRCULATION CLEANER. Henry Michaelson, New York, N. Y. Application May 8, 1933. Serial No. 669,576. 1 Claim. (Cl. 225-12.)

In a beer pipe cleaner an elongated upright valve body, an upper inlet and a lower outlet extending from said valve body, sleeves projecting from opposite sides of said valve body and in communication with the interior thereof, elbow fixtures depending from said sleeves, said elbows having reduced ends, sighting glasses extending downwardly from the reduced ends of said elbows, a pair of oppositely disposed circulation nozzles coupled to said sighting glasses, a tapering valve stem rotatably mounted on a horizontal axis in said valve body, intersecting passageways in said valve body, oppositely disposed channels in said valve

stem for alternating the direction of flow of a column of water in said beer pipe cleaner, an elongated valve handle, a square shank on said valve stem having said valve handle secured thereto, an offset lug on said valve body, a lug extending from the secured end of said handle being adapted to cooperate with the lug on the valve body to limit rotation of said valve handle and valve stem, said beer pipe cleaner being adapted to have means introduced therein to frictionally and abrasively remove the sediment from the coils of a beer pipe circulation system.

1,951,270. AIR CONDITIONING APPARATUS. Curtis E. Bradburn, Garden City, Kan., assignor of one-third to John L. Rogers and one-third to Charles F. Spidell, both of Abilene, Kan., and one-sixth to Paul A. Skinner and one-sixth to George W. Finnup, both of Garden City, Kan. Application March 15, 1932. Serial No. 599,007. 1 Claim. (Cl. 261-92.)

Air conditioning apparatus including a housing having an air inlet at one end and an air outlet at its other end, a transverse partition extending longitudinally within the housing and slotted transversely, vertical partitions between the bottom portion of the housing and the longitudinal partition dividing into separate compartments the space beneath the longitudinal partition, tubular connections between the compartments providing water seals and the sole means of communication between the compartments, a shaft axially disposed within the housing above the longitudinal partition and mounted for rotation, flat foraminous disks rotatable with the shaft and working within the respective slots, said disks extending close to the wall of the housing means for removing excess moisture from the surfaces of the disks prior to their emergence from the slots, and an insulating material covering the longitudinal partition and those portions of the housing constituting the outer walls of the compartments, thereby to protect the contents of the compartments from the action of air outside of the housing and above the longitudinal partition within the housing.

1,951,305. REFRIGERATOR. Jacob H. Hoffberger, Baltimore, Md., assignor to The C. Hoffberger Co., Baltimore, Md., a corporation of Maryland. Application Feb. 13, 1933. Serial No. 656,574. 1 Claim. (Cl. 62-46.)

Automatic Oil Separators

PRESSURE WATER REGULATING VALVES
HIGH SIDE FLOATS—EXPANSION VALVES
FILTERS—STRAINERS—DRIERS
HYDRON BELLOWS—LUBRICANTS
SOFT SEAT PACKLESS VALVES
AND OTHER ACCESSORIES

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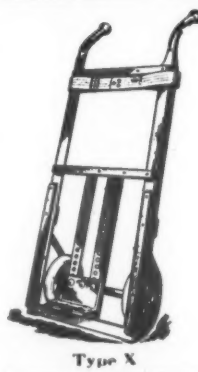
REPAIRS	REPLACEMENT PARTS
B & B Household Controls.....\$2.50	Howell Special Capacitor Type
Penn Household Controls.....2.50	1/4 HP Refrigerator Motor.....\$11.00
Penn Commercial Controls.....4.50	Amer. Rad. Household Exp. Valve 4.25
Amer. Rad. Household Exp. Valve.....2.50	Amer. Rad. Multiple Exp. Valve.....7.50
Amer. Rad. Multiple Exp. Valve.....3.50	Penn Commercial Controls \$8 & \$12.00
Apex Water Regulating Valve.....3.50	Isobutane (Freezole) Per lb.....1.50
Penn Water Regulating Valve.....3.50	Methyl Chloride, Per lb......70

We also carry a complete stock of Gilmer Belts, Penn Water Regulating Valves, Glass Defrosting Trays, Lead and Fibre Gaskets Etc. WRITE FOR PRICES.
Forty Eight Hour service on repairs, immediate shipment on replacements. All Repairs and Parts guaranteed to be free from defects in Workmanship, and Material for ONE YEAR.

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Chicago, Illinois.



Type X

The Dayton CARRIER Truck
Deliver Your Refrigerators on Rubber

Type X has 53 inch Handles and 8 inch Rubber Wheels. Type Y has 70 inch Handles, 5 inch Rubber Wheels and skids.

Type X with one strap \$16.00
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THE TRADEMARK OF FOUR
PACE SETTERS
IN COIL EFFICIENCY

SUR-E-FEX	Fin Coils
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AIR-E-FEX	Air-Conditioning Units

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550 Macabees Bldg., Detroit, Mich. Date.....
☐ Enter my subscription to Electric Refrigeration News for one year (52 issues).
☐ Enclosed find \$3.00. ☐ Send bill.
☐ Send me the 1934 Refrigeration Directory and Market Data Book.
☐ Enclosed find \$3.00. ☐ Send bill.
☐ Enclosed find \$5.00, the combination rate for both the News and the Directory.
☐ Send bill.

Name.....
Attention of.....
In Care of.....
Street Address.....City and State.....
We sell the.....refrigerator and.....
(Please indicate other products or principal line of business.)

QUESTIONS

Gas Masks

No. 1520 (Distributor, Spain)—"We have read with much interest the article in the Nov. 1, 1933, issue of ELECTRIC REFRIGERATION NEWS on how to use gas masks in refrigeration service work. We are in the domestic and commercial refrigeration business, and would like to have the address of firms in your country which make such gas masks."

Answer—The new 1934 REFRIGERATION DIRECTORY and MARKET DATA BOOK will list the following manufacturers of gas masks:

Mine Safety Appliance Co.
Braddock, Thomas & Meade Sts.
Pittsburgh, Pa.
Pulmonose Safety Equipment Corp.
136-A Johnson St., Brooklyn, N. Y.

Kerosene-Operated Refrigerators

No. 1521 (Dealer, Indiana)—"Kindly send us the names of companies making oil-burning refrigerators for rural homes."

Answer—Following firms make such equipment:
Electrolux Refrigerator Sales, Inc.
Evansville, Ind.
Gibson Electric Refrigerator Corp.
Greenville, Mich.
Perfection Stove Co.
7609 Platt Ave., Cleveland, Ohio

Refrigerators for Export

No. 1522 (Exporter, New York)—"We have received letters from several prospects in Europe in which they advise us that they are buying household electric refrigerators as low as \$60."

"If you know of any manufacturers who can furnish us with a refrigerator about 52 in. high, a two-tray unit, for around \$50 packed for export,

F.A.S. New York, please put us in touch with them. We are also very much interested in securing a line of commercial refrigerators for export."

Answer—All manufacturers of both household and commercial electric refrigeration equipment are listed in the new 1934 REFRIGERATION DIRECTORY and MARKET DATA BOOK which will be available in about two weeks. The News will gladly forward the name of any manufacturer interested in this inquiry.

Mayflower

No. 1523 (Washing machine distributor, West Virginia)—"Will you be kind enough to give us the name and address of the manufacturer of the Mayflower electric refrigerator. If we get into the refrigeration business, you may be sure we will subscribe to ELECTRIC REFRIGERATION NEWS."

Answer—The Mayflower is manufactured by the Trupar Mfg. Co., 140 Davis St., Dayton, Ohio.

Underwriters' Report on Refrigerants

No. 1524 (Manufacturer, New York)—"In your issue of Jan. 24 appears an article under the heading 'Underwriters Issue Extensive Report on Hazards of Refrigerants' in which is a summary of a 118-page report issued by the Underwriters' Laboratories. If you will let us know where we can secure copies of this report, your courtesy will be greatly appreciated."

Answer—This report is entitled "The Comparative Life, Fire, and Explosion Hazards of Common Refrigerants," and is available from the Underwriters' Laboratories, 207 E. Ohio St., Chicago, Ill.

Puro-Filter and Wayne Units

No. 1525 (Manufacturer, Ohio)—"Please give us names and addresses of the organizations making 'Puro-Filter' and 'Wayne' refrigeration units."

Answer—The Puro-Filter water

cooler is manufactured by the Puro-Filter Corp. of America, Inc., 440 E. Lafayette St., New York, N. Y.

The Wayne household electric refrigerator was formerly made by the Wayne Oil Burner Corp., Ft. Wayne, Ind., but the refrigeration division of the company was purchased about two years ago by the Apex Electric Mfg. Co., 1067 E. 152nd St., Cleveland, Ohio, which is now marketing it as the Apex electric refrigerator.

Sales Distribution

No. 1526 (Distributor, New York)—"The writer desires information on sales distribution in numbers of units for standard makes of domestic electric refrigerators, especially in the New York City metropolitan area, and also in the large cities and counties covering the eastern and southeastern states for the last three or four years."

Answer—A breakdown of monthly refrigeration sales by states for 1933 was published in the Feb. 14 issue of ELECTRIC REFRIGERATION NEWS. These data, together with sales by states for 1932 and 1931 and all other available statistical information on the refrigeration industry will appear in the new REFRIGERATION DIRECTORY.

Icy-Ball Refrigerator

No. 1527 (Dealer, Nebraska)—"Can you give me the name and address of the manufacturer of the 'Icy-Ball' refrigerator?"

Answer—Crosley Radio Corp., Cincinnati, Ohio.

Speed of Commercial Machines

No. 1528 (Research agency, New York)—"How fast should a 2-ton refrigerating machine run—in r.p.m.—for best results?"

Answer—This is no rule on this. The answer is that a compressor should run at the speed for which it was designed. Two-ton machines made by the leading manufacturers run from 400 to 600 r.p.m.

Coin Meters

No. 1529 (Service and installation company, Ohio)—"Kindly advise us where we can purchase coin meters to handle from 15 to 50 cents per 24 hours."

Answer—The new REFRIGERATION DIRECTORY will list the following suppliers:

General Electric Co.
Industrial Dept., Schenectady, N. Y.
International Register Co.
15 S. Throop St., Chicago, Ill.
Landis & Gyr, Inc.
104 Fifth Ave., New York, N. Y.
Mills Novelty Co.
4100 Fullerton Ave., Chicago, Ill.
J. P. Seeburg Corp.
1510 State St., Chicago, Ill.
Shay West
616 S. Michigan Ave., Chicago, Ill.
Zell Products Corp.
536 Broadway, New York, N. Y.

Self-Contained Room Coolers

No. 1530 (Manufacturer, Missouri)—"A number of dealers handling our commercial line have approached us asking if we have, or intend to bring out, a self-contained room cooler."

"We would like to know if you have data on room coolers made by the various manufacturers. We are interested in obtaining the size in horsepower of each manufacturer's product, as well as the retail price and other pertinent information."

Answer—By self-contained room coolers, presumably you mean those room coolers with the compressor, condenser, motor, cooling coils, etc. all housed in one cabinet. These have been introduced by Carrier, I.G. General Electric, and Westinghouse.

According to our information, the I.G. and Westinghouse coolers of this type contain 1/2-hp. motors, while the General Electric and Carrier self-contained room coolers have 1-hp. machines. We have no accurate data on prices.

Due to the lack of standardization in the design of air-conditioning equipment, we have never attempted to collect specifications as was done for household and commercial refrigerators. However, we are now planning a "Specifications Issue" on air conditioning; that will doubtless bring out the additional information you require.

Grunow

No. 1531 (Distributor, Spain)—"On looking over your last issue of ELECTRIC REFRIGERATION NEWS, we see on page 11 a large advertisement of the firm 'Grunow.' Please advise this firm that we are interested, and would like to learn the 'rest of the story.'"

Answer—Address General Household Utilities Corp., 2638 N. Crawford Ave., Chicago, Ill.

A.S.H.V.E. Technical Papers

No. 1532 (Research engineer, Nebraska)—"If possible, we would like to obtain a copy of the paper 'A Study of Summer Cooling in the Research Residence for the Summer of 1933' by Prof. A. P. Kratz and S. Konzo of the University of Illinois."

"This paper was given before the A.S.H.V.E. convention in New York, and was reported on page 14 of the Feb. 14 issue of ELECTRIC REFRIGERATION NEWS. Any tables or drawings that go with this paper are also desired."

If a copy of the paper is not available, another copy of your Feb. 14 issue will be useful."

Answer—For copies of papers presented at A.S.H.V.E. conventions, address A. V. Hutchinson, secretary of the American Society of Heating and Ventilating Engineers, 51 Madison Ave., New York, N. Y.

Oil for Brine

No. 1533 (Manufacturer, Missouri)—"We would like to have a copy of that issue of ELECTRIC REFRIGERATION NEWS which describes this new brine solution manufactured by the Standard Oil Co."

Answer—The oil which Standard Oil is offering for use as a brine in ice cream cabinets was briefly described in the Sept. 20, 1933, issue of the News. For more detailed information, communicate with E. S. Herman, Standard Oil Co. of California, 10th & Hope Sts., Los Angeles, Calif.

Humidifiers

No. 1534 (Canada)—"The writer is interested in the manufacture and sale of humidifiers and air-conditioning equipment in Canada, and through contact with the Union Electric Light & Power Co. of St. Louis, I have learned that you published a complete list of companies manufacturing this class of merchandise. Can you forward a copy of this list to me?"

Answer—The last-published list of companies making humidifiers and air-conditioning equipment was in our July 12, 1933, issue. This information has been brought up to date for the new 1934 REFRIGERATION DIRECTORY.

Zero Plate Co.

No. 1535 (Manufacturer, New Jersey)—"We are desirous of obtaining the address of the Zero Plate Co. Can you tell us?"

Answer—180 N. Michigan Ave., Chicago, Ill.

Used Commercial Machines

No. 1536 (Service company, Cuba)—"I would like to get in touch with someone selling used commercial compressors from 1/4 hp. upwards. I would prefer Frigidaires if possible, rebuilt or not. Can you direct me to a source of supply for such equipment?"

Answer—We will gladly forward your name to any firm interested with such equipment available.

Motor Parts

No. 1537 (Service company, Kansas)—"Please advise me where to secure a catalog of small motor parts."

Answer—Write to the manufacturers of motors you are servicing. These companies are all listed in the REFRIGERATION DIRECTORY.

Kelvinator's Refrigerant

No. 1538 (Attorney, West Virginia)—"I am endeavoring to ascertain the kind of gas used by manufacturers of Kelvinator refrigerators prior to Nov. 1, 1933. The U. S. Bureau of Standards in Washington, D. C., advises me that you probably have this information."

Answer—Sulphur dioxide is, and has been, used exclusively in Kelvinator household refrigerators. In Kelvinator commercial machines either sulphur dioxide, methyl chloride, or Freon is used, depending upon the type of commercial application.

Electric Parts

No. 1539 (Service company, Massachusetts)—"Can you tell us who makes or carries replacement parts for the Electric refrigerator?"

Answer—Try the Deissler Machine Co., Greenville, Pa.

Offer Night Course on Electric Refrigeration

BOSTON—University Extension Division of the State Department of Education here has arranged evening lecture courses on household refrigeration in four Massachusetts cities—Lowell, Worcester, Lynn, and New Bedford.

Each class will comprise eight illustrated lectures, covering operation, installation, and servicing of electric household refrigerators. Prof. DeWitt M. Taylor, formerly of Massachusetts Institute of Technology and University of Maine engineering departments, will conduct all classes.

The Lowell course will meet in the high school on Fridays, beginning March 30, at 7:30 p. m. The New Bedford course will start Tuesday, April 3, at 6:45 p. m. in the public library. The Lynn class will also meet in the public library, beginning Thursday, April 26, at 7:15 p. m. In Worcester, meetings will be held in the Classical High School, starting Wednesday, April 11, at 7:15 p. m.

Caulley Joins Detroit Office Of Republic Steel

DETROIT—Ralph G. Caulley has joined the Detroit sales office of Republic Steel Corp., according to N. J. Clarke, vice president in charge of sales. Mr. Caulley had been with Wheeling Steel Corp. for 14 years.

CLASSIFIED

PAYMENT in advance is required for advertising in this column.

RATES: Fifty words or less, one insertion \$2.00, additional words four cents each. Three insertions \$5.00, additional words ten cents each.

REPLIES to advertisements with box numbers should be addressed to the box number in care of Electric Refrigeration News, 550 Maccafee Bldg., Detroit, Mich.

POSITIONS AVAILABLE

SALESMEN! OPPORTUNITY! Successful, aggressive, Westinghouse dealer in Florida has opening for three thoroughly experienced retail domestic refrigerator salesmen. Straight commission only. Must have experience and be willing to work. Store also sells entire line of Westinghouse major appliances, furnishes leads, protection of prospects. Commissions paid Saturdays. Write Lee Valade, Inc., 415 Laura St., Jacksonville, Fla.

EQUIPMENT FOR SALE

FOR SALE: Patent rights, tools, dies, dehydrating ovens, and approximately 950 cabinets of reliable manufacture. For particulars write Box 617.

EQUIPMENT WANTED

WE BUY FOR CASH any quantity of household or commercial electric refrigerators of any type, make or model. Please advise on any equipment available so that we may submit bids to you for prompt business. When writing, please mention model number and year. Box 618.

INDEPENDENT SERVICE COMPANIES

HALELECTRIC Thermostat repair service. Ranco, B & B, Two dollars each, one year guarantee, prompt service. Halextric Laboratory, 1793 Lakeview Road, Cleveland, Ohio.

COMPLETE repair service on evaporators, float valves, compressors and other parts. Small compressor seal repairs, \$2.50 to \$4. Float valve repairs and calibration, \$2.00. Other repair and parts prices on request. Forty-eight hour service. Material and workmanship guaranteed for one year. Refrigeration Maintenance Corp., 365 East Illinois Street, Chicago, Illinois.

PROFESSIONAL SERVICE

NO HELP. NO FEE. Refrigeration problems, design and production, solved by thoroughly experienced consultant in strict confidence. Expert advice in new developments. Box 616.

MISCELLANEOUS

NATIONAL COMMISSION SALESMEN'S ASSOCIATION advocates better selling conditions through recognition under NRA code, deplores irregularities and indiscriminate overcrowding of men in the field. Write R. A. Hey, Secretary, National Commission Salesmen's Association, 124 E. Fort Lee Road, Bogota, N. J., for copy of petition forwarded NRA.

COMPLETE overhaul service of all Frigidaire products—float-valves, water-valves, flapper-valves, switches, coils, receivers, compressor bodies, complete condensing units, electric motors repaired and rewound. "Gates" belts, "Ansul" Sulphur Dioxide, "Reserco" oil. Lowest prices. Workmanship and materials fully guaranteed. A trial will convince you. Refrigeration Service Corporation, 2823 N. 23rd St., Milwaukee, Wis.

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THE test of time is a severe one, and those organizations that have achieved success through the years have earned the reputation of

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only through sincere effort in the right direction.

Our Eighth Successful Year

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Wells at Kinzie Street, Chicago

Complete and practical refrigeration training by extension methods



REFRIGERATOR FRUIT DISPLAY

Durable composition Fruits, Vegetables, Meats, Fowl, etc. Natural colors, very realistic. 22 pieces in our line.

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REG. U. S. PAT. OFF.

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(DU PONT METHYL CHLORIDE)

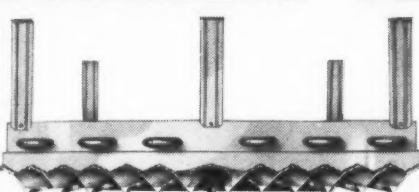
THE IDEAL REFRIGERANT

Write for technical book and service manual

R.H. Chemicals

The R. & H. Chemicals Dept.
E. I. du Pont de Nemours & Co., Inc.
Wilmington, Delaware

PEERLESS FLASH COOLER



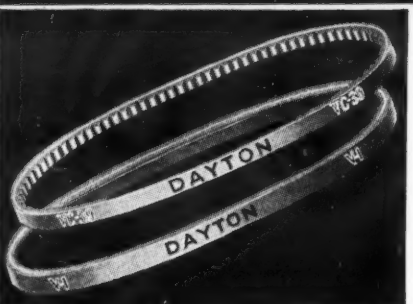
The NEW Eye Appealing Method of Cooling Walk-In Refrigerators

STYLE & RESULTS

Fin Coils and Drip Pans Engineered in an Integral Unit—Saves Installation Cost and Operating Cost

PEERLESS ICE MACHINE CO. 515 W. 35th St. Chicago

DAYTON V-BELTS



● There is a Dayton V-Belt for all makes and types of refrigerators. A stock is available near you. Send for price list and name of your nearest distributor.

THE DAYTON RUBBER MFG. CO.
DAYTON, OHIO
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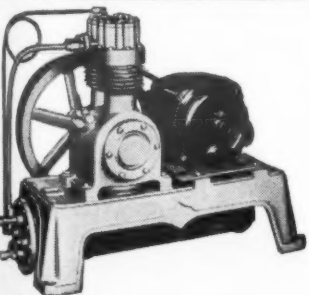
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